A Course in Consciousness

Part 1: Quantum theory and consciousness

Part 2: The metaphysics of nonduality

Part 3: The end of suffering and the discovery of our true nature

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Important: Because this course makes many statements, the reader might think that it comprises a new belief system, either to be adopted or rejected. However, that is not my intention nor is it the intention of the sages of nonduality who are quoted and discussed. Beliefs are not understanding in themselves--they can actually be obstructions to understanding. Because Reality cannot be described in words, the words are meant to be used as pointers to Reality rather than as descriptors of Reality. Hence, this is a course in seeing, not in believing.

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Dialogue in Consciousness

1. What is the difference between a concept and Reality?

a. A concept is a thought of a separate object together with a name or identifier of the object.

b. Thoughts begin to arise in early childhood. The infant's mind contains few concepts whereas the sage's mind sometimes may contain many thoughts but the sage always sees directly that separation is an illusion.

c. Without thoughts, there are no objects (e.g., in dreamless sleep, under anesthesia, or in samadhi) because, by definition, an object is the thought of it.
d. Reality is not a thought. Rather, It is absence of separation.

2. What is meant by true and untrue concepts?

a. A belief is a concept which contains the concept of attachment.
b. A belief that cannot be verified by direct seeing is always subject to attack by a counter-belief. Therefore, it must be constantly reinforced by repetition of the belief.
c. Since Reality is absence of separation, It cannot be perceived. Therefore, concepts cannot describe Reality (but they can be true, see g and h below).
d. Example: A material object by definition is separate from other material objects. Therefore, material objects are not real. The belief that material objects are real is constantly reinforced by materialistic culture, and is sustained only by a failure to see the distinction between objects and Reality.
e. Although concepts cannot describe Reality, they can point to Reality.
f. A pointer is an invitation to see directly the distinction between an object and Reality.
g. If a concept asserts or implies the reality of any object, it is untrue. If it negates the reality of an object, it is true (but not a description of Reality). A true concept can be a useful pointer to Reality.
h. Example: The concept that material objects are not real is true, and is a pointer to Reality.

3. What is the world (the universe)?

a. The world (the universe) is the collection of objects consisting of the body-mind and all other objects. The world appears to exist in time and space.
b. However, time and space are nothing but concepts. They are not real.
c. Time is the concept of change. Since all objects change, all objects are temporal concepts.
d. Space is the concept of extension (size and shape). Since all objects are extended in space, all objects are spatial concepts.

4. What are polar, or dual, pairs of concepts?

a. Thought always results in inseparable pairs of concepts (dual pairs) because every thought has an opposite.
b. Reality is apparently split into dual pairs by thought. However, no thought is real since Reality cannot be split.
c. The result of apparently splitting Reality into dual pairs of concepts is called duality.
d. The two concepts of a pair are always inseparable because the merger of the opposites will cancel the pair.
e. Example: "I"/not-"I" is a dual pair of concepts. If the "I" and not-"I" merge, neither concept remains.

5. What is Awareness/Presence?

a. Awareness/Presence is not a concept or object. It is what is aware of all concepts and objects.
b. It does not change and It has no extension so It is time-less and space-less.
c. However, It is said to be space-like because all concepts and objects are said to appear in It.
d. The terms “Awareness/Presence” and “Reality” are equivalent conceptual pointers.

6. What are We?

a. We are not a concept or object because We are what is aware of all concepts and objects.
b. Therefore, We are Awareness/Presence.
c. Because the body-mind and the world are objects, they appear in Us--We do not appear in them.
d. We do not appear in the body so We are not contained or restricted by it.

7. What is existence?

a. An object is said to exist if it is believed to be separate from Awareness/Presence. It then also appears to be separate from other objects.
b. Existence is only apparent because Awareness/Presence always remains unsplit.
c. The apparently real existence of objects is called illusion (Maya).
d. The sage, being only Awareness/Presence and knowing only Awareness/Presence, knows that he/she is not separate from anything.

8. What is the "I"-object?

a. When an "I"-concept is believed to be separate from Awareness/Presence, it is said to exist as an "I"-object.
b. However, clear seeing shows that there is no "I"-object.
c. We are not objects and We do not exist as objects. We are Reality (Awareness/Presence).

9. What is it that makes other objects seem to exist?

a. Whenever the "I"-object appears to arise, the not-"I" object also appears to arise.
b. Then, desire for completion also arises, including the desire for the not-"I" object.
c. But, because fear/desire form a dual pair, whenever desire arises, fear also arises, including the fear of the not-"I" object.
d. Thus, the not-"I" object seems real.
e. Thoughts also splits the apparent not-"I" object into a multitude of apparent objects, and fear/desire makes them all seem real.

10. What is the true nature of all objects?

a. All apparent objects arise in Awareness/Presence.
b. Because physical space and time are apparent objects, they also arise in Awareness/Presence.
c. No apparent object is separate from Awareness/Presence. Thus, all apparent objects consist of Awareness/Presence.
d. Objects are not real as objects but they are real as Awareness/Presence.
e. Awareness/Presence welcomes/loves all apparent objects that appear in It.

11. What is the personal sense of doership?

a. Along with illusory "I"-object, arises also the sense of personal doership.
b. However, since there is no "I"-object, there is no doer, no thinker, no chooser, and no observer.
c. Therefore, "we" have no control. Thus, whatever happens, happens. Whatever doesn't happen, doesn't happen.

12. If there is no doer, how do things happen?

a. Everything that happens is only an arising in Awareness/Presence.
b. Only one arising is present at any moment. No other arisings are ever present to affect the arising that is present.
c. Since no arising is present to affect the arising that is present, there can be no law of cause-and-effect.
d. The concept of causality, i.e., that one event causes another event, is only an arising in Awareness/Presence.
e. Since causality is only a concept, "I" can never do anything.
f. Because "I" can do nothing, neither can "I" choose. Thus, free will is nothing but an empty concept.

13. What is suffering?

a. The feeling of being separate is an arising that carries with it a sense of shame for feeling isolated, alienated, lonely, and disconnected.
b. The sense of free will is an arising that carries with it the feeling of personal responsibility for "my" past and "my" future.
c. The sense of personal responsibility is an arising that carries with it guilt and regret for "my" past and worry and anxiety for "my" future.

14. What is awakening (enlightenment)?

a. Awakening is the realization that I am not separate and I have never been separate. Therefore there is no shame.
b. Awakening carries with it the realization that I do nothing and I have never done anything. Therefore, there is no regret, guilt, worry, or anxiety.
c. Awakening is the awareness that Reality, which is what I am, has never been affected by any concepts.

d. Awakening is the awareness that my true nature includes a sense of Welcoming/Love.

15. What can we do to awaken?

a. Since direct seeing shows that there is no doer, there is nothing that the "individual" can do to awaken.
b. Since awakening transcends time, no practice that occurs in time can bring about awakening. Thus most practices do not bring about awakening.
c. However, direct seeing can bring about awakening because direct seeing is timeless seeing.

16. Does this mean that there is no hope for the sufferer?

a. Definitely not. There are many practices that will lead to less suffering. However, like all other actions, they are never done by a doer since there is no doer. Therefore, "we" cannot do them. If they happen, they happen. If not, they don't.
b. Example: To see that there is no "I", look inward for it and see that there is none. See also that everything that happens, including all thoughts and feelings, happens spontaneously so there can be no doer.
c. Example: To see that no object exists, look and see that all objects are nothing but arisings in Awareness/Presence. Then, look and see that no object could ever bring "you" peace. Finally, see that nothing can affect You who are Awareness/Presence/Presence Itself.

17. What else can we do?

a. We can go inward and downward and feel the breath. This takes us out of the head and the thinking mind and puts us in the body and the senses.
b. We can practice mindfulness and see that our attachments and aversions are nothing but arisings in Awareness/Presence.
c. We can become aware that all objects are nothing but arisings in Awareness/Presence and therefore cannot affect Us.
d. We can see that there can be no suffering in pure Awareness/Presence.
e. We can trust Awareness/Presence, which is our true nature.
f. We can rest in Awareness/Presence, which is our home.

Foreword

From 1992 through 1995, I taught several seminars on reality and consciousness according to quantum theory for humanities undergraduates at the University of Virginia. These seminars attempted to outline in an understandable way to the nonscientist the reasons why consciousness is a necessary part of the most widely accepted interpretations of quantum theory. For these seminars, I wrote concise but complete notes which I handed out to my students, and which summarized the salient points in order to make as clear as possible the scientific basis for the seminar. A revised and refined version of these notes comprises Part 1 of this work.

From 1995 through spring 2008, again for the undergraduate nonscientist, I taught many seminars on nonduality, or Advaita, beginning with the above described scientific information as Part 1, following with several speculative chapters on the metaphysics of nonduality as Part 2, and concluding with the teachings of several contemporary jnanis, or enlightened sages, as Part 3. Sages are not usually interested in teaching the principles of nonduality in such a systematic, logical way since such a conceptual system can be a prison for the mind, leading it to think that it can transcend itself (escape from its self-imposed prison) merely by mastering the system. Nevertheless, for teaching purposes, I wrote a set of notes for these seminars also. Beginning with fall 2007, I began to teach the same course to senior citizens and other college graduates also.

I have continually updated and refined these notes as my experience and insights have evolved. My intent has been to present the teaching of nonduality in a scientifically sound and logically consistent, but still readable, document. While there is little about Part 1 that any scientist would disagree with, given enough time for careful contemplation, there is considerable material in Parts 2 and 3 that is in disagreement with what some sages say. The reason for this difference is that science deals entirely with concepts, which can be seen to be either self-consistent or not, and in agreement with observations or not, while it is impossible for a sage to use concepts to describe Reality, because Reality transcends all concepts. In science, concepts are (or are not) truth, while in spiritual teachings, concepts can only be pointers to Reality. The sage uses concepts as tools to crack open the conceptual prisons in which we live, but then all of those concepts must be thrown away or they become chains in our bondage. Nevertheless, there are many concepts in Parts 2 and 3 that are susceptible to verification by direct observation by those who think they are still in prison, and these impart credence to the rest of the teaching.

For the reader who is not interested in quantum theory, an abbreviated but still complete course of study can be obtained merely by omitting Chapters 2, 3, 4, 6, 7, and 8. These are the chapters which show that physics is incomplete without consciousness; they are not needed for understanding the remaining material.

Some people may want to read an even shorter course, covering only the principles and practices of Advaita. This would consist only of Chapters 9, 10, 11, 12, 20, 21, 22, 23, 24, and 26.

Part 1. Quantum theory and consciousness

Preface to part 1.

Part 1 consists of notes on the philosophical and scientific underpinnings of this course in consciousness. We establish the context of our discussion within the three major types of metaphysical philosophy, ask the questions that are naturally raised when one begins a study of conscious mind, summarize the scientific data that must be taken into account in any attempt to understand the phenomena of consciousness, and present a simple, understandable description of the philosophical and quantum theoretical basis for the need to include consciousness in our description of the material world. We shall see that, from a sound, scientific point of view, not only is it impossible to understand the material world without considering the consciousness of the observer, but, in fact, it is Consciousness which

manifests the world. However, it cannot be the individual consciousness of the observer that does this, but it must be nonlocal, universal Consciousness.

Chapter 1. The three major metaphysical philosophies

1.1. The assumption of objective reality, a necessity for survival and for science?

The assumption of an external reality is the assumption that there is a real world that is external to our mind and senses, and that it exists whether or not we as observers exist, and whether or not we are observing it. It is one we all commonly make without even thinking about it. We assume the office and the computer in it are there after we leave work at the end of the day and will be there when we arrive at work in the morning. When we head home at the end of the day, we assume that our house or apartment will be there when we arrive, and that it continued to be there in our absence after we left in the morning. We assume that our friends, relatives, and acquaintances are there whether we can see and talk to them or not, and whether or not we are thinking about them. We assume that our parents existed before we were born, and that many of the people we know will be alive after we die. So many of our everyday experiences repeatedly confirm this assumption that most of us hardly question it. It is an assumption that has enormous survival value: we know that a speeding car can kill us while we are crossing the street absorbed in our thoughts and unaware, that a stray bullet can instantly obliterate our consciousness without warning, or that we can die from an external agent such as a virus, bacterium, or poison.

The assumption of external reality is necessary for science to function and to flourish. For the most part, science is the discovering and explaining of the external world. Without this assumption, there would be only the thoughts and images in our own mind (which would be the only existing mind) and there would be no need of science, or anything else.

In addition to the assumption of an external reality, we also make the assumption that this reality is objective. Objectivity means that observations, experiments, or measurements by one person can be made by another person, who will obtain the same or similar results. The second person will be able to confirm that the results are the same or similar by consultation with the first person. Hence, communication is essential to objectivity. In fact, an observation that is not communicated and agreed upon is not generally accepted as a valid observation of objective reality. Because agreement is required, objective reality is sometimes called consensus reality.

Questions: Is there any way to verify that an object exists if you are not observing it?
If you think an unobserved object can be verified by its effects on observed objects, how can you verify that the effects come from the unobserved object?
If somebody tells you they have observed the unobserved object, how can you verify that they have?
If you cannot verify it, why would you believe them?

As we have said, science assumes that objective reality is "external" to the minds that observe it. Even psychologists make this assumption in their study of mental functioning when they study minds other than their own. We assume that the results are objective because they can be communicated to other minds and compared. Because of this, many mental phenomena,

even though they are by necessity subjective, are considered to be objective and for this reason, we consider psychology to be an objective science.

The concept of objective reality is also applied to the study of history, which is thought to be a more-or-less accurate record of past events. In order to be considered an objective part of the record, events must be agreed upon by historians. However, history is continually changing as new historical "facts" appear, so history is only what we think it is at the present time. Even Napoleon is reputed to have said, "What is history but a fable agreed upon?".

What about the person who observes his/her own thoughts, feelings, and sensory experiences? In this case, the observed reality is clearly not external, but it still can be communicated and compared with similar internal observations of others, so, if there is agreement, normally we regard it to be objective. For example, there is no difficulty when we compare the mental steps that we go through while working the same math problem, or even when we compare our experiences of fear, or red, if we are responding to the same "external" stimuli. If we agree that we are seeing or feeling the same thing, then we define these experiences to be objective but not external.

Question: Is there any way of verifying that your thoughts exist if you are not observing them?
If you believe they exist in your subconscious mind, how can you verify that?
If you cannot verify it, why would you believe it?

In fact, all observations of so-called "external" reality are really observations of our own sensory experiences. There are experiences for each of the so-called "external" senses. For example, there are visual experiences, auditory experiences, tactile experiences, olfactory experiences, and gustatory experiences. These experiences are all assumed to result from "external" stimuli. (Here, "external" means external to the senses, not necessarily external to the body. For example, if I experience pain in response to being stuck with a hypodermic needle or having been stricken by the flu, we normally assume that the pain is objective.) The mind constructs objective sources for all of these experiences, such as visible objects, audible objects, touchable objects, odiferous objects, and tastable objects.

If we now ask, “what are purely subjective experiences?”, we are led to consider experiences that are purely internal to the mind and that are not the direct result of some “external” stimulus. Everyday examples of such experiences are thoughts, memories, feelings, emotions, imaginations, dreams, and visions. However, many such experiences are so similar to those of other people that we can easily communicate them to others, so they have an objective quality and are hence not usually considered to be purely subjective. This type of objectivity is thus based on what so-called “normal” people commonly experience. In fact, one could define “normality” as the condition of having such experiences.

Now we must consider experiences that are also purely internal to the mind, but that fall outside the bounds of normality as defined above. These types of experiences we might call purely subjective since they are not easily communicated to others and hence lack both external stimulus and objectivity. Examples are hallucinations, delusions, religious and other ineffable experiences, and the experiences of awakened or self-realized minds. It is clear that our definition of subjectivity depends on our definition of normality. In fact, we shall see later

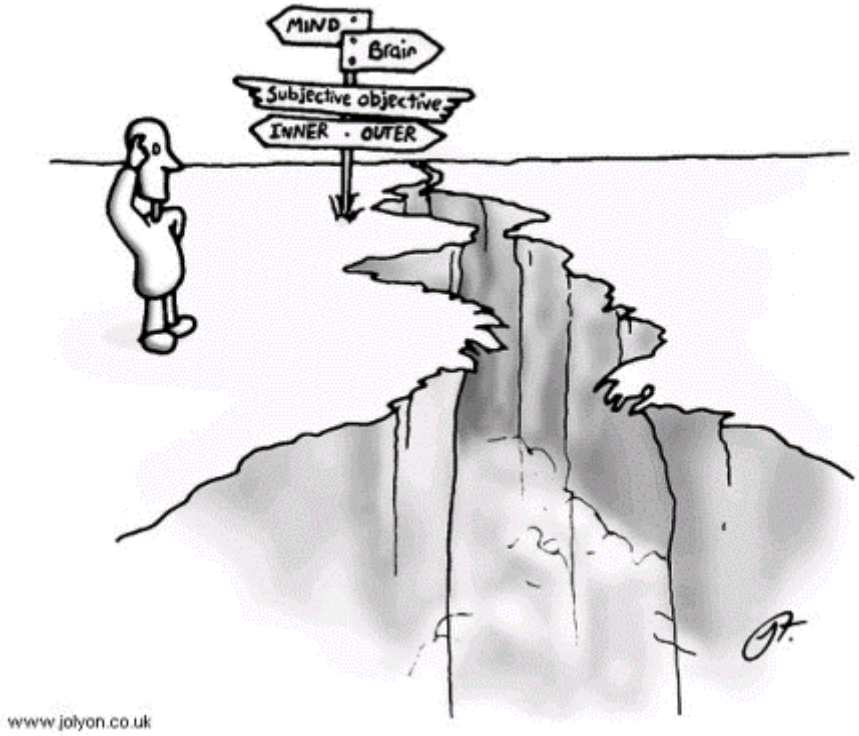
that “normal” minds can be really considered to be suffering from collective delusion and that all suffering, while “normal”, is the result of this delusion.

Does the mind function when we are not observing it? In our everyday experience, the mind will sometimes appear to work on a problem unconsciously or subconsciously, i.e. without conscious awareness, so that the solution later appears full-blown, seemingly in a flash of genius. However, this assumes that the mind is a real object that can exist outside of awareness, i.e., that it is objectively real. (Later we shall use a different definition for the mind.) Because the subconscious and unconscious minds can never be observed directly, their existence can only be an assumption.

Because all of our experiences are necessarily subjective, we have no means to get beyond them to any kind of objective reality that might exist. Because of this, it is impossible for an objective reality to reveal itself through any observation. Thus, the existence of an objective reality can never be proved and, even if such an objective reality existed, it could never affect any of our observations.

Question: Is there any way of verifying that your feelings exist if you are not observing them?
If you believe they exist subconsciously, how can you verify that?
If you cannot, why would you believe it?

While we may call it reality, external objective reality is not reality at all. An assumption that by its very nature cannot be verified is not a physical assumption, but is called a metaphysical assumption. (Such an assumption can also be called an axiom.) Thus, the bedrock of all science is not science at all but is metaphysics! Not only the nature of science, but also our experience of living, would be fundamentally changed if this assumption were not made. Later in this course, we shall discuss a teaching in which this assumption is not made and which gives us a radically different picture of ourselves and of the world.



To leap or not to leap? Art by Jolyon, www.jolyon.co.uk

1.2. Materialism (pure objectivity): The philosophy that all is matter, or at least, all is governed by physical law

The earliest well-articulated philosophy of materialism was that of Democritus (Greek philosopher, c. 460 - c. 370 BC). He postulated a world made up entirely of hard, invisible particles called atoms. These atoms had shape, mass and motion, but had no other qualities, such as color or flavor. These latter qualities were considered to be subjective and were supplied by the observer, who also was considered to be comprised of atoms.

Little further progress was made with materialist philosophy until after the Protestant Reformation, which was initiated in Germany in the 1520s by the Augustinian monk, Martin Luther (1483 - 1546). This stimulated such ferment that the Roman Catholic order of the time was overturned and was replaced by the new religious, political, and scientific orders of the 17th century. Atomism was then revived in the 1640s by French scientist and Catholic priest, Pierre Gassendi (1592 - 1655), who sought to combine the theory with Catholic doctrine. However, beginning in the 1640s, the liberation of science from all Church authority by the philosophy of Cartesian dualism (see next section) and the subsequent enormous scientific advances of the 19th and 20th centuries solidified the authority of the materialists, and materialism became the dominant philosophy of the Western world.

Even those who claim to hold to philosophies other than materialism are influenced by it, perhaps in ways they are completely unaware of. Its fundamental principle is that matter and energy are primary and all else is secondary in the sense that all else is derived from, or is an outgrowth of, matter and energy. Since the advent of quantum theory in the 1920s and its fundamental questions about the nature of matter, this philosophy has sometimes been

broadened to state that physical law rather than matter and energy is primary, i.e., everything can be explained and understood in terms of physical law. This is called scientism, or scientific materialism.

Of course, this immediately begs the question, what is physical law? One could say that physical law includes all of the laws of reality, in which case the question becomes meaningless. For our purposes, we shall restrict the definition of physical law to those laws recognized to be part of physics. Physics we shall understand to be the study of the fundamental laws that govern the external, objective reality that was defined in the previous section. Therefore, we shall understand materialism to be the philosophy that external, objective reality is primary, and everything else, such as all mental phenomena, are derived from, or are effects of, such reality.

The widespread belief in materialism has profound effects in our lives and in our society. If we believe this way, we must conclude that everything, including ourselves and all of life, is governed completely by physical law. Physical law is the only law governing our desires, our hopes, our ethics, our goals, and our destinies. Matter and energy are our primary focus, the object of all of our desires and ambitions. Specifically, this means that our lives are focused on acquiring material goods (including bodies), or at least rearranging or exchanging them, in order to produce the maximum material satisfaction and pleasure. We expend all of our energy in this quest for there can be no other goal. And in all of this, we have no choice because we are totally governed by physical law. We may feel trapped by these beliefs and desires, but we cannot shake them. They totally dominate us.

A succinct, personalized, summary statement of materialist philosophy is, “I am a body.”

Question: Do you think that you are a body? If not, what are you?

We may think that we totally disagree with this philosophy but let us think a bit more. Don’t we think that we are the servants and prisoners of our bodies; that we must do their bidding, under threat of hunger, thirst, disease, and discomfort if we do not? Isn’t the welfare of our bodies our primary concern, even to the extent that it is central to our plans for our entire future or in reliving our whole past? Even if we substitute somebody else’s body for our own in the above questions, the same drives still dominate us. We are almost totally body oriented, that is to say, matter minded. There is little, if any, freedom in this predicament.

Do you feel limited by your material needs and desires?

Even the field of psychology has been influenced by materialism, the principle result being the thesis of behaviorism, which was popular during the first half of the twentieth century. This states that our behavior is totally determined by materialistic motivations, and that consciousness and awareness have no effect on it. This thesis has been a useful premise in much psychological research, particularly with animals. It also has worked its way into the thinking of society with the result that social and economic institutions commonly attempt to modify our behavior by offering material inducements. In fact, this type of behavior modification actually does work to the extent that we have adopted materialistic beliefs.

A major problem of materialist philosophy is how to explain consciousness. Materialists can hardly deny the existence of consciousness because it is a universal experience.
The generally accepted materialist explanation is that consciousness is an epiphenomenon, or an emergent feature, of matter. It develops when material objects reach a certain level of complexity, that of living organisms, or at least of certain types of them. However, because it is totally dependent on matter for its existence, it cannot affect or influence matter. It can only be aware of it. Matter is still primary.

A related problem is how to determine the level of complexity at which consciousness is present. If mammals are conscious, are birds? Are insects? What about amoebas and bacteria? If the ability to reproduce is the only criterion, what about self-reproducing protein molecules, like prions (the infectious agent in "mad cow" disease)? If complexity is the only criterion for consciousness, what about inanimate objects? If they are included, at what level of complexity? If they are excluded, why are they excluded? Materialists have no answers to these questions.

Question: Do you think that dogs and cats are conscious? If so, what is your evidence?
Question: Do you think that bacteria are conscious? If so, what is your evidence?
Question: Do you think that computers are conscious? If so, what is your evidence?

1.3. Cartesian dualism (objectivity plus subjectivity): The philosophy that both matter and mind are primary and irreducible

This philosophy was first propounded by René Descartes (French scientist and philosopher, 1596 - 1650) in 1641. It states that mind and matter (or the mental and the physical) are two separate and independent substances. Human beings (but not animals, according to Descartes) are composed of both substances. A mind is a conscious, thinking entity, i.e., it understands, wills, senses, and imagines. A body is an object that has physical size, i.e., it exists in physical space. Minds do not have physical size (hence do not exist in physical space) and are indivisible, while bodies are infinitely divisible (in Descartes' philosophy). Descartes initially wanted to limit his premises only to those that were indisputable; hence his famous premise "I think, therefore I am." The "I" in this statement is the mind and, since it does not exist in physical space, it can in principle survive the death of the physical body. Even though Descartes thought that mind and body existed independently of each other, he thought that mind could act on body.

The succinct, personalized, summary statement of dualism is, "I am a mind, and I have a body."

Question: Do you agree with the preceding statement? If not, what are you?

Dualism appeals to the intuition much more than does materialism. It is depressing to think, "I am a body," but less so to think, "I have a body." Many people have little doubt that they will survive the death of the body, at least in their hopes.

A major philosophical problem with dualism is the same as that posed by materialism. Do animals have minds? If animals are excluded, there is the problem of explaining some of their

near-human behaviors. If animals are included, do we exclude any of them? What about plants and microbes? What about protein molecules and other inanimate objects? Cartesian dualism has no satisfactory answers to these questions.

Another problem with dualism is to explain the relationship between mind and matter, particularly the effect that one can have on the other. It is not difficult to see that the body affects the mind. In particular, we (meaning our minds) seem to be affected by our bodies' health and comfort, and we certainly seem to be affected by whether or not the body is awake or asleep. Are these real effects, or are they illusion? If they are real, what is the mechanism for the body affecting the mind? Ultimately, we should be able to answer this question if the mind is physical since, in that case, it should obey physical law. If it is nonphysical, then we may not ever be able to answer it using the methods of science.

The related question is, does the mind affect the body, and if so, how? This also requires knowledge of the laws obeyed by mind in order to answer fully. (We shall see that some interpretations of quantum theory state that mind manifests matter, a not insignificant effect.) The lack of satisfactory answers to all of these questions has resulted in a substantial discrediting of Cartesian dualism among philosophers.

How does the adoption of dualism as a personal philosophy affect our lives? The primary problem seems to be that it implies incomplete liberation from the limitations of the body. As long as we believe that we have a body, we will feel responsible for it, and that will ever be a source of fear. If materialism forever prevents us from being released from the body's prison, dualism allows us to get only half way out the door. We are still chained to the bars, with only the death of the body finally cutting the chains.

In spite of the deficiencies of dualism, Descartes succeeded in forever liberating science (the study of external, objective reality) from the dominion of Church dogma, which was based on the appeal to authority and which temporarily retained domination of the mind. From then on, science was allowed to flourish unimpeded. Science became so successful in predicting and controlling nature that scientists began to question the validity of all religious teachings. Materialism became more dominant as physical reality became better understood. Mind took a back seat and was reduced to an epiphenomenon. The Western world eagerly accepted the offerings of materialist philosophy and became intoxicated with the comforts and pleasures that it offered. It reduced mind to a tool whose main use was to insure more and better houses and cars, more prestigious jobs and careers, and more beautiful mates and children. However, the inevitable result was the mind-stultifying hangover that now results.

1.4. Idealism (pure subjectivity): The philosophy that consciousness is all and all is consciousness

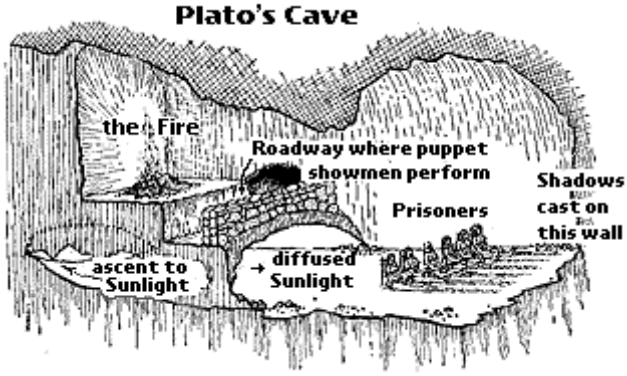
Idealism states that mind or consciousness constitutes the fundamental reality, or is primary. Some versions of idealism admit the independent existence of material objects, others deny that material objects exist independently of human perception.

Anaximander (Greek philosopher, c. 611 BC - c. 547 BC) may have been the first idealist philosopher. Only one fragment of his writing has been preserved but he seems to have thought that the original and primary substance (which could be consciousness) is a boundless

something from which all things arise and to which they all return. He was struck by the fact that the world presents us with a series of opposites, of which the most primary are hot and cold, wet and dry. He thought of these opposites as being "separated out" from a substance which was originally undifferentiated.

Plato (Greek philosopher, c. 428 BC - c. 348 BC) is often considered the first idealist philosopher, chiefly because of his metaphysical doctrine of Forms. Plato considered the universal Idea or Form, sometimes called an archetype—for example, redness or goodness—to be more real than a particular expression of the form—a red object or a good deed. According to Plato, the world of changing experience is unreal, and the Idea or Form—which does not change and which can be known only by reason—constitutes true reality. Plato did not recognize mystical experience as a route to true reality, only reason.

Idealism was first expounded by Plato in his cave allegory in *The Republic* (c. 360 BC) (see, e.g., Julia Annas, *An Introduction to Plato's Republic,* 1981, p. 252). The cave is a metaphor for the mind. Prisoners are in an underground cave with a fire behind them, bound so they can see only the shadows on the wall in front of them, cast by puppets manipulated behind them. They think that this is all there is to see; if released from their bonds and forced to turn around to the fire and the puppets, they become bewildered and are happier left in their original state. They are even angry with anyone who tries to tell them how pitiful their position is. Only a few can bear to realize that the shadows are only shadows cast by the puppets; and they begin the journey of liberation that leads past the fire and right out of the cave into the real world. At first they are dazzled there, and can bear to see real objects only in reflection and indirectly, but then they can look at them directly in the light of the sun, and can even look at the sun itself.



This allegory is related to idealism in the following way. The cave is the mind. The shadows of the puppets that the prisoners are watching represent their taking over, in unreflective fashion, the second-hand opinions and beliefs that are given to them by parents, society, and religion. The puppets themselves represent the mechanical, unreasoning minds of the prisoners. The light of the fire within the cave provides only partial, distorted illumination from the imprisoned intellects. Liberation begins when the few who turn around get up and go out of the cave. Outside of the cave, the real objects (the Forms) are those in the transcendental realm. In order to see them, the light of the sun, which represents pure reason, is necessary. A similar allegory using today's symbols would replace the cave with a movie theater, the shadows with the pictures on the screen, the puppets with the film, and the fire with the projector light. The sun is outside, and we must leave the theater to see its light (we must leave the mind).

The next major idealist philosopher was Plotinus (204/5 – 270 AD), who is generally regarded as the founder of Neoplatonism. He was one of the most influential philosophers in antiquity after Plato and Aristotle (who was primarily a philosopher of politics, ethics, and nature). The term "Neoplatonism" is an invention of early 19th century philosophers and was intended to indicate that Plotinus initiated a new phase in the development of the Platonic tradition. The (greatly simplified) basic principles of Neoplatonism are 1) The One (nondual Reality), which is the first principle of all. It is both self-caused and the cause of all dualistic concepts. 2) Intellect, which works with dualistic concepts that are derived from Plato's Forms. 3) Soul, which is the principle of desire for external objects. These principles are both ultimate ontological realities and explanatory principles.

The eighteenth century British philosopher George Berkeley (1685 - 1753) was one of the major exponents of idealism. He denied the existence of material substance (calling his philosophy immaterialism), and held that the universe consists of God, which is the infinite spirit; of finite spirits including human beings; of ideas that exist only in the minds of spirits; and of nothing else. According to Berkeley, spirits are able to perceive ideas but ideas are inert, without any power to perceive. His most characteristic philosophical doctrine is summarized in the expression "to be is to be perceived." In other words, to say that a material object exists is to say that the idea of it is perceived by a spirit. Since Berkeley assumed that material objects exist without human spirits to perceive them, the mind that perceives them must be divine rather than human.

The German philosopher Immanuel Kant (1724 - 1804) expounded a form of idealism that he called transcendental idealism. He believed that there is a reality that is independent of human minds (the noumenon, or thing-in-itself), but that is forever unknowable to us. All of our experience, including the experience of our empirical selves (the phenomenon, or thing-as-it-appears), depends on the activity of a transcendental self, also of which we can know nothing.

Georg Wilhelm Friedrich Hegel, also a German philosopher (1770 - 1831), built on the idealist philosophy of Kant, and called his system absolute idealism. He believed that reality is Absolute Mind, Reason, or Spirit. Absolute Mind is universal, while each individual mind is an aspect of it, as is the consciousness and rational activity of each person. Absolute Mind continually develops itself in its quest for its own unification and actualization. For this purpose, it manifests itself as the subjective consciousness of the individual, who undergoes a rational process of development from a purely materialistic and self-centered state to a universal and rational consciousness. In this process, the individual passes through several phases--family, society, state--each of which represents a move from individualism to unity. Human history in general is the progressive movement from bondage to freedom. Such freedom is achieved only as the separate desires of the individual are overcome and integrated into the unified system of the state, in which the will of the individual is replaced by the will of all.

The forms of idealism described above were all formulated by Western philosophers, who almost exclusively depended on rational thought to develop their philosophies. They scarcely took account of the many forms of Eastern philosophy, which are heavily dependent on mystical experience. Furthermore, there was very little recognition of the theories and knowledge that science was developing from the 17th century on.

Questions: If everything is consciousness, whose consciousness is it?

Is there more than one consciousness? If so, what defines a consciousness?
If there is more than one consciousness, how do different consciousnesses communicate?

Solipsism is a form of idealistic philosophy that states that nothing exists that you yourself are not observing. On the other hand, *nonsolipsistic* idealistic philosophy states that nothing exists unless it is being observed by any conscious observer. Because these are idealistic philosophies, there is no objective reality in either of them. A flaw in both of these views is the assumption that the observer itself is an objective entity (see Section 1.1). But if there is no objective reality, neither can there be an objective observer.

For our purposes in this section, we shall consider a version of idealism, called monistic idealism, which states that Consciousness and only Consciousness is fundamental and primary. Everything, including all matter and every mind, exists within Consciousness. From this point of view, matter is an emergent feature, or epiphenomenon, of Consciousness, rather than the reverse as in materialism. There are perplexing paradoxes in quantum theory that result from a materialist or a dualist philosophy but that do not arise in an idealistic philosophy.

In this philosophy, Consciousness is Awareness (Noumenon) together with all of the objects of Awareness (phenomenon). The impersonalized, summary statement of monistic idealism is, "I am Consciousness". We shall see later that all objects of Awareness are really Awareness in disguise. Hence, "I am Consciousness" translates to "I am Awareness".

Question: Do you agree with the preceding statement? If not, what are you?

This suggests that, in order to realize that we are Awareness, we must first look inward, away from all phenomenal objects. Awareness is not an object and therefore cannot be described conceptually or perceived as an object. My true nature as Awareness can be realized only by looking away from both the conceptual and the perceptual. After we realize this, we will be able to see that Awareness is All that is.

We can adapt Plato's cave allegory to represent monistic idealism in the following way. The fire is replaced by the light of the sun (pure Awareness) coming in through the entrance to the cave, and the puppets are replaced by archetypal objects within the transcendent realm. The phenomenal world of matter and thoughts is merely the shadow of the archetypes in the light of consciousness. Here, we clearly see a complementarity of phenomenon and Noumenon. To look only at the shadows is to be unaware of Awareness. To be directly aware of Awareness is to realize that the phenomenal world is merely a shadow. The shadow world is what we perceive. Awareness can only be apperceived, i.e., realized by a knowing that is beyond perception. Apperception liberates one from the shackles of the cave, and exposes one to unlimited freedom. Apperception is the verification that consciousness is all there is.

1.5. The teaching of nonduality

So far, we have been discussing metaphysical philosophies without really defining what we mean by metaphysical philosophy. A metaphysical philosophy is a purely conceptual structure that is presumed to be a logically self-consistent description of some aspect of reality. It does not necessarily include techniques for experiencing this reality. A philosophy is different from

what we shall call a teaching. The purpose of a teaching is to help a student to know a reality, whether it is phenomenal or noumenal. Since the emphasis is on knowing rather than on logic, a teaching may use whatever concepts and techniques work in bringing the student to the desired state of knowing. A teaching often will have a philosophical basis, but there is no particular requirement to adhere rigidly to it.

Closely related to the philosophy of monistic idealism is the teaching of nonduality (in Sanskrit called Advaita). Nonduality as a coherent teaching was first formulated by Sankara (c. 788-820, see http://www.advaita-vedanta.org/avhp/sankara-life.html), a philosopher and theologian born in Kerala in southern India. A Hindu ascetic who lived for only 32 years, he interpreted the *Vedanta* (see note below) monistically, and ascribed all reality to a single unitary source that he identified as *Brahman*. In this, he declared all plurality and differentiation to be nothing but an illusion.

[Note: *Vedanta* is one of the six orthodox systems of Indian philosophy, and the one that forms the basis of most modern schools of Hindu philosophy. The term *Vedanta* means the "conclusion" of the *Vedas*, which comprise the earliest sacred literature of India. The three fundamental *Vedanta* texts are the *Upanishads*; the *Brahma-Sutras*, which are very brief, even one-word interpretations of the doctrine of the Upanishads; and the famous poetic dialogue, the *Bhagavadgita* ("Song of the Lord"), which, because of its immense popularity, Sankara drew upon for support of the doctrines found in the Upanishads.]

Sankara's formulation of nonduality was written in Sanskrit, and contained many references to Hindu culture and religion. In addition to the difficulty of accurately translating it into English, there is the problem of separating its core teaching from everything else. Therefore, in this course, we shall rely only on modern teachers of nonduality, especially those who write and speak in English and direct their teaching at Western audiences.

Nonduality is a teaching, not a philosophy, because it uses many methods of pointing the mind away from the conceptual and towards the nonconceptual. Awareness cannot be described--it must be known directly without the intermediary of concepts. The teaching of nonduality, while it uses concepts, is really a pointer to the truth that our true nature is Awareness. Our discussion of quantum theory and consciousness in Part 1 of this course is necessarily philosophical because, like all of science, it deals strictly with concepts. However, in Parts 2 and 3 we depart from philosophy and study instead the teaching of nonduality.

As paradoxical as it might seem, Advaita is more "scientific" than is the materialistic premise of an objective, external world because it is based on the immediate and direct experience of our consciousness, rather than on a metaphysical concept. The concept of an external world is not primary, but is a mental construct based on sense impressions and therefore, like all concepts, it must be taught and learned, while the self-evident experience of consciousness is preconceptual and cannot be denied.

1.6. The distinction between Consciousness, Awareness, and mind

Here, we must say what distinction we shall make between mind and consciousness. Many writers use "mind" when other writers use "consciousness" to describe the same thing. In Chapters 1 through 8, we shall use the word consciousness (uncapitalized) rather ambiguously to mean either mind or the general principle of consciousness. This reflects the ambiguity of

common usage. Beginning in Chapter 9, we shall be more precise and shall start referring to Consciousness (capitalized) as All-That-Is. This includes Noumenon (the Unmanifest) and phenomenon (the manifest). When we speak of our experience, we shall often refer to Noumenon as Awareness, and to phenomenon as mind. Then the word mind will mean only the experience of the mental, sensory, and perceptual functioning of the individual organism, not to any kind of physical object such as the brain. The combination of body and mind we shall refer to as the body-mind organism. After Chapter 9, we shall not use consciousness (uncapitalized) unless we are following the usage of other writers.

Exercise: Whenever you can think of it, ask, "What is it that does not change no matter what I am doing or what is happening? Then look and see. The purpose of the question is to focus your attention. The answer comes when you look and see.
Exercise: Consider the inquiry, who/what am I? Look and see if you are a thought, image, feeling, emotion, sensation or some combination of these. If you think you are, look and see what it is that thinks so.

1.7. What is Reality not?

We shall see that, according to the teaching of nonduality, Reality is not:

1. What you have been told it is.
2. What you think it is.
3. What you believe it to be.
4. What you want it to be.
5. What you think it should be.

Well, then, what is It?

We shall see that the only way to find out is to look and see for yourself, not to believe. In fact, this is a course in seeing, not in believing.

Chapter 2. Classical physics from Newton to Einstein

2.1. The scientific method

The scientific method has five major components:

1. The assumption of an external, objective reality that can be observed.

2. Quantitative experiments on the external, objective reality in order to determine its observable properties, and the use of induction to discover its general principles. This was first systematically articulated by English statesman Francis Bacon (1561 - 1626) in his *Novum Organum*, published in 1620.

3. Analyzing quantitative experiments with mathematical precision. Italian scientist Galileo Galilei (1564 - 1642) is thought to be the first to clearly state that the laws of nature are mathematical. He has been variously called the "father of modern

observational astronomy", the "father of modern physics", and the "father of modern science". In his 1632 book*, Dialogue Concerning the Two Chief World Systems*, he argued for the Copernican model of the solar system against the traditional Ptolemaic system. He was convicted of heresy for this by the Catholic Church in 1633.

4. Validation of the results of experimental measurements by widespread communication and publication so that other scientists are able to verify them independently. Although scientists throughout history have communicated and published their results, the first scientist to articulate the need for publishing the details of his experimental methods so that other scientists could repeat his measurements was English chemist Robert Boyle (1627 - 1691), who was strongly influenced by the views of Bacon.

5. Intuiting and formulating the mathematical laws that describe the external, objective reality. The most universal laws are those of physics, the most fundamental science. English natural philosopher Isaac Newton (1642 - 1727) was the first scientist to formulate laws that were considered to apply universally to all physical systems.

The last four of these components (three of them by Englishmen!) were all developed in the remarkably brief period from 1620 to 1687.

2.2. Newton's laws and determinism

In order to understand quantum physics, we must first understand classical physics so that we can see the differences between them.

There are two fundamental assumptions in classical physics. The first fundamental assumption is that the objective world exists independently of any observations that are made on it. To use a popular analogy, a tree falling in the forest produces a sound whether or not it is heard by anyone. While it is possible that observations of the objective world can affect it, its independence guarantees that they do not necessarily affect it.

Questions: How might our lives be different if there were no external objective reality but we did not know it?
What if we did know it?

The second fundamental assumption of classical physics is that both the position and velocity of an object can be measured with no limits on their precision except for those of the measuring instruments. In other words, the objective world is a precise world with no intrinsic uncertainty in it. As we shall see later, quantum theory abandons both of these fundamental assumptions.

Isaac Newton was the first important scientist both to do fundamental experiments and to devise comprehensive mathematical theories to explain them. He invented a theory of gravity

to explain the laws of German astronomer and mathematician Johannes Kepler (1571 - 1630), which describe the planetary orbits, made use of the famous free-fall experiments from the leaning tower of Pisa by Italian scientist Galileo Galilei (1564 - 1642), and invented the calculus in order to give a proper mathematical framework to the laws of motion that he discovered. Newton considered himself to be a natural philosopher, but contemporary custom would accord him the title of physicist. Indeed, he, probably more than any other scientist, established physics as a separate scientific discipline because of his attempts to express his conclusions in terms of universal physical laws. He is thought by some to have been the greatest scientist that has ever lived. In 1687 at the age of 44 he published his *Philosophiae Naturalis Principia Mathematica (Mathematical Principles of Natural Philosophy)* in which he set forth his laws of motion and gravitation.

His three laws of motion can be written as follows:

> 1. A body moves with constant velocity (speed and direction) unless there is a nonzero net force acting on it. (A body at rest has a constant zero velocity, thus the net force acting on it must be zero.)
>
> 2. The rate of change of the velocity (change in speed or direction, called the acceleration) of a body is proportional to the force on the body.
>
> 3. If one body exerts a force on another body, the second body exerts an equal and opposite force on the first.

In order to use these laws, the properties of the forces acting on a body must be known. As an example of a force and its properties, Newton's law of gravitation states that the gravitational force between two bodies, such as the earth and the moon, is proportional to the mass of each body and is inversely proportional to the square of the distance between them. This description of the gravitational force, when used together with Newton's second law, explains why the planetary orbits are elliptical. Because of Newton's third law, the force acting on the earth is equal and opposite to the force acting on the moon. Both bodies are constantly changing their speeds and directions because of the gravitational force continually acting on them.

Another example is the gravitational force acting between the earth and my body. Whenever my body is stationary, there must be another force acting on it, otherwise Newton's first law would not be correct. If I am sitting on a chair, this other force is an upward force acting on my body by the chair, and this just cancels the gravitational force acting on my body by the earth. The force acting on my body by gravity (my weight) is equal and opposite to the force acting on my body by the chair, and vice versa.

Question: What is our most immediate sensation of the gravitational force? What if we are in free fall?
Question: What are the forces on a car if it is accelerating straight ahead? If it is moving with constant speed in a circle?

For more than 200 years, after many experiments on every accessible topic of macroscopic nature, Newton's laws came to be regarded by physicists and by much of society as the laws

that were obeyed by all phenomena in the physical world. They were successful in explaining all motions, from those of the planets and stars to those of the molecules in a gas. This universal success led to the widespread belief in the principle of determinism, which says that, if the state of a system of objects (even as all-encompassing as the universe) is known precisely at any given time, such as now, the state of the system at any time in the future can in principle be predicted precisely. For complex systems, the actual mathematics might be too complicated, but that did not affect the principle. Ultimately, this principle was thought to apply to living beings as well as to inanimate objects. Such a deterministic world was thought to be completely mechanical, without room for free will, indeed without room for even a small deviation from its ultimate destiny. If there was a God in this world, his role was limited entirely to setting the whole thing into motion at the beginning.

Intrinsic to the principle of determinism was the assumption that the state of a system of objects could be precisely described at all times. This meant, for example, that the position and velocity of each object could be specified exactly, without any uncertainty. Without such exactitude, prediction of future positions and velocities would be impossible. After many, many experiments it seemed clear that only the inevitable imprecision in measuring instruments limited the accuracy of a velocity or position measurement, and nobody doubted that accuracies could improve without limit as measurement techniques improved.

Question: How might our lives be different if the world were deterministic but we did not know it? What if we did know it?
Questions: Suppose you accepted the principle of determinism as truth. How would you then feel about your feelings, decisions, and actions? About other people's feelings, decisions, and actions? How would it affect your judgments about yourself and others?

2.3. Thermodynamics and statistical mechanics; entropy and the direction of time

Thermodynamics is the physics of heat flow and of the interconversion between heat energy and other forms of energy. Statistical mechanics is the theory that describes macroscopic properties such as pressure, volume and temperature of a system in terms of the average properties of its microscopic constituents, the atoms and molecules. Thermodynamics and statistical mechanics are both concerned with predicting the same properties and describing the same processes, thermodynamics from a macroscopic point of view, and statistical mechanics from a microscopic point of view.

In 1850, the German physicist Rudolf Clausius (1822 - 1888) proposed the first law of thermodynamics, which states that energy may be converted from one form to another, such as heat energy into the mechanical rotation of a turbine, but it is always conserved. Since 1905 when German-Swiss-American physicist Albert Einstein (1879 - 1955) invented the special theory of relativity, we know that energy and matter can be converted into each other. Hence, the first law actually applies jointly to both matter and energy. This law is probably the most fundamental one in nature. It applies to all systems, no matter how small or large, simple or complex, whether living or inanimate. We do not think it is ever violated anywhere in the universe. No new physical theory is ever proposed without checking to see whether it upholds this law.

Question: What are some everyday examples of the first law of thermodynamics?

The second law of thermodynamics can be stated in several ways. The first statement of it, made by Rudolf Clausius in 1850, is that heat can flow spontaneously from a hot to a cold object but it cannot spontaneously pass from a cold to a hot object. The second statement of the second law was made later by Scottish physicist William Thomson Kelvin (1824 - 1907) and German physicist Max Planck (1858 - 1947): Heat energy cannot be completely transformed into mechanical energy, but mechanical energy can be completely transformed into heat energy.

Question: What are some everyday examples of the second law of thermodynamics?

The third statement of the second law depends on a new concept, that of entropy. In order to discuss entropy, we first discuss the number of distinguishable arrangements of a system, from which the concept of entropy is derived. Some readers may wish to skip this discussion and go directly to the definition of entropy that is given afterwards.

Example #1: Imagine a box divided into two compartments, each of which can hold only one ball. Put a ball into one of the compartments. Clearly, the number of ways that you can do this is two--the ball can be put into either compartment. (Mathematically, this is the number of combinations of two objects taken one at a time; this is given by the binomial coefficient).

Example #2: If there are three compartments, the number of ways you can put a ball in is three (the number of combinations of three objects taken one at a time).

Example #3: If there are four compartments, the number of ways you can put a ball in is four (the number of combinations of four objects taken one at a time).

Example #4: Now put two identical balls into a box with two compartments. The number of ways you can do this is only one (the number of combinations of two objects taken two at a time) because if the balls are interchanged, there is no distinguishable difference in the arrangements.

Example #5: Now put two identical balls into a box with three compartments. The number of ways you can do this can be counted in the following way:

a) The first ball in compartment #1, the second in either of the other two. This adds up to two.
b) The first ball in compartment #2, the second in either #1 or #3. But the first arrangement is identical to the first arrangement of a), so we don't count it. The second arrangement is new, so we count it. If now the first ball is now put into #3, the second can be put into either #1 or #2, but these are not new, so we don't count them.

Thus, the total number of distinguishable arrangements for two identical balls in three compartments is three (the number of combinations of three objects taken two at a time).

Example #6: Now put two identical balls into a box with four compartments. We count the number of possible ways as follows:

a) The first ball in #1, the second in #2, #3, or #4. This adds up to three.
b) The first ball in #2, the second in #1, #3, or #4. The first is the same as the first arrangement of a), so there are two new distinguishable arrangements.
c) The first ball in #3, the second in #1, #2, or #4. Only the last arrangement is new, so there is

one additional distinguishable arrangement.
d) The first ball in #4, the second in #1, #2, or #3. Each of these arrangements is identical to a), b), or c), so these are not new.

Thus, the total number of distinguishable arrangements for two identical balls in four compartments is six (the number of combinations of four objects taken two at a time).

Example #7: Now put two balls into only the first three of four compartments. This is identical to Example #5 except that now there are two balls in four compartments instead of two balls in three compartments. The number of distinguishable arrangements is now three as long as we know that the balls are in the first three compartments. This example shows that the number of distinguishable arrangements depends not only on the number of balls and compartments, but also on how the balls are distributed in the compartments.

The methods of probability allow us to calculate the number of distinguishable arrangements in any number of compartments whether the balls are identical or not, and for any given distribution of balls. For a given number of compartments and for identical balls, the number of distinguishable arrangements is smallest (equal to one) when the number of balls is the same as the number of compartments (example #4). This would correspond to a pure crystalline solid material. For a given number of compartments and identical balls, the number of distinguishable arrangements is maximum when the number of balls is equal to half the number of compartments (example #6). This would correspond to a highly compressed gas. For a rarefied gas, the number of compartments (each equal to the size of a molecule) is vastly larger than the number of molecules, and the number of distinguishable arrangements is much greater than one (example #3) but less than the maximum (example #6).

We are now able to define entropy. Entropy is related to (actually, is proportional to the logarithm of) the total number of distinguishable possible arrangements of the system (in a six-dimensional position-velocity space--three dimensions for position and three for velocity--rather than in the three-dimensional position space of the example above). Entropy quickly increases as we increase the volume of the system, the number of objects in it, and the total energy of the objects. For a macroscopic system, say of 10^{23} particles, the entropy is enormously larger than for the system of two balls described above. Entropy also is larger when the objects are uniformly distributed (example #6) than when they are clumped together (example #7). It turns out that it is also larger when energy as well as mass is distributed uniformly. Since energy is related to temperature, entropy is larger when the temperature is uniform, and it increases when the temperature increases.

Entropy is related to the amount of disorder and order in the system. Decreasing entropy is equivalent to decreasing disorder or disorganization (increasing order or organization) of an object or system (example #7); while increasing entropy is equivalent to increasing disorder or disorganization (decreasing order or organization) (example #6).

It turns out that the second law of thermodynamics can be stated in the following way: Natural processes of an isolated macroscopic system normally proceed in the direction of maximum probability (maximum disorder), which is the direction of maximum number of distinguishable arrangements of the system. (It is highly improbable, although not totally impossible, for them to proceed in the opposite direction.) The forward direction of time is the direction in which entropy increases. Thus, the second law of thermodynamics can be restated in terms of entropy: Natural processes of an isolated macroscopic system always proceed in the direction of increasing entropy (disorder). In classical physics, this defines the forward direction of time. In Section 6.4, we shall see what determines this direction in quantum physics. (Note that we

have emphasized that the second law applies only to a system that is isolated from the rest of the universe, or to the universe as a whole.)

The second law is based on our observations of the direction in time of natural processes. We say that this direction depends on the universe proceeding in time from a state of lower entropy to a state of higher entropy but, in classical physics, the increasing direction of entropy is identical to the forward direction of time. We cannot distinguish one from the other. It is tautological to say that entropy increases with time because the increase of entropy cannot be distinguished from the forward direction of time. However, in quantum physics, the direction of time is determined by the nature of a quantum event (see Chapter 6).

[Note: The fact that the forward direction of time is the direction of increasing entropy implies that the universe began in a much lower entropy state than that of today. What caused the entropy to be so low when the universe began is not known. This is a subject of intensive research in theoretical cosmology.]

The direction of time can also be inferred from the first two statements of the second law of thermodynamics: 1) The unidirectional flow of heat from hot to cold bodies, and 2) the possibility of total conversion of mechanical energy to heat energy, but not the reverse.

A mistake made by some people is to think that the second law applies to individual objects or systems, such as automobiles, plants, or human bodies, even if they are not isolated from the rest of the universe, and that this is the reason that such objects decay and disintegrate with time. This is a fallacy, however, because the second law does not prevent the entropy of an individual object from continuously decreasing with time and thus becoming more ordered and organized as long as it receives energy from something else in the universe whose entropy continues to increase. In our solar system, it is primarily the sun's entropy that continually increases as its fuel is burned and it becomes more disordered.

The above discussion is based on our understanding of objective time within classical physics. It says nothing about our subjective sense of the passage of time. Regardless of what the clock says, everybody experiences time as passing faster in some circumstances than in others. Our experience of duration depends on our perception of the degree of change and on our accompanying emotional state ("Time flies faster when you're having fun"; "How time flies!").

Question: Do you think that the entropy of your body is decreasing as you get older, or is it increasing?

Economist Jing Chen has written that natural selection in biological evolution can be seen as a force towards low entropy states of the human mind at the cost of increasing entropy of the universe (see *The Entropy Theory of Human Mind* at http://web.unbc.ca/~chenj/1.pdf):

> People generally think that physical laws only have limited utility in understanding human behavior because our mind is free. However, human mind is shaped by natural selection and sexual selection. Living organisms need to extract low entropy from the environment, to defend their low entropy sources and to reduce the diffusion of the low entropy. The struggle to stay in low entropy states is called natural selection. In human societies, agriculture is the main low entropy source. Part of health care systems aim

at defending our own low entropy sources to be accessed by viruses and bacteria. The military forces are established to extract low entropy from others and to defend own low entropy sources. Clothing and housing reduces the diffusion of low entropy.

Sexual selection is the struggle between the individuals of one sex, generally the males, to communicate their attractiveness to the other sex in order to form a partnership for reproduction. Human beings, as well as other sexually reproducing species, are the successful descendants of the earliest sexually reproducing species about a billion years ago. For the system of communication to be successful in different kinds of environments over such a long time, the mode of communication has to be simple, stable and universal. Since the entropy law, which states that closed systems tend towards states of higher entropy, is the most universal law of the nature, it is natural that the display of low entropy levels evolves as the universal signal of attractiveness in the process of sexual selection.

As both natural selection and sexual selection favor low entropy state, the pursuit of low entropy becomes the main motive of human mind and animal mind. Indeed the low entropy state is the main way of advertisement for most sexually reproducing species. Large body size, colorful and highly complex feather patterns with large amount of information content and exotic structures are all different representations of low entropy states. Since a low probability event corresponds to a state of low entropy, a novel feature is often attractive in the competition for reproduction. It has been generally recognized that sexual selection is the main drive of diversity.
Besides communication with members of the opposite sex, social animals need to communicate their attractiveness and power in order to influence the behavior of others. For the same reason as in sexual selection, the most general signal is display of low entropy. Among all social species, human beings have developed the most complex social structure. The creation of distinct art works, the demonstration of athletic prowess, the accumulation of wealth, and conspicuous consumption - all of which represent different forms of low entropy - are the major methods of advertising one's attractiveness.

As the social groups become larger and the division of labor becomes finer, people become less familiar with each other in their daily interactions, which make it more difficult for people to judge the ability of others. The need for people to advertise their attractiveness through external accumulation of low entropy also becomes stronger. People usually signal their capability by buying more expensive houses, cars, clothes, going to more expensive restaurants and attending more exclusive schools. The great efforts human beings put into non-food activities reflect the high cost of communication in a large and complex society. Historical evidences show that the transaction costs have been increasing over time.

The "transaction costs" that Chen speaks about mean that the struggle to achieve and sustain localized low entropy states leads to higher entropy in the universe as a whole.

Question: In your own life, how do you experience the struggle to achieve and sustain low entropy states? What are the transaction costs of this struggle, i.e., in what way does your struggle increase the overall entropy of the world? How successful have you been in your efforts to achieve and maintain low entropy states? How sustainable are such states?

An extremely important property of Newton's laws is that they are time reversal invariant. What this obscure-sounding term means is that, if the direction of time is reversed, the directions of motion of all particles are also reversed, and this reversed motion is completely allowed by Newton's laws. In other words, the motion in reversed time is just as valid as the motion in forward time, and nature herself does not distinguish between the two. A simple example of this is the time-reversed motion of a thrown baseball, which follows a parabolic trajectory in either the forward or the reversed direction. Without seeing the act of throwing, and without air resistance, we would not be able to distinguish the forward parabola from the reversed parabola. Another way to state it is that a movie of a thrown baseball seems just as valid to us if it is run in the reverse direction as in the forward direction. Time reversal invariance is also apparent in the seemingly random motion of the molecules in a gas. If we could see their

motion in a movie and then reverse it, we could not distinguish between the forward motion and the reversed motion (see http://www.colorado.edu/physics/phet/web-pages/simulations-base.html Physics→Heat and Thermo→Gas Properties).

However, if we consider the motion of an object containing many ordered particles (for example, with a recognizable size, shape, position, velocity, and orientation), we encounter a different phenomenon. It is easy to tell the difference between the reversed and forward motions of a person, a horse, a growing plant, a cup falling from a table and breaking, and most other examples from everyday life. Another example is the free expansion of a gas that initially is confined to one side of a box by a membrane. If the membrane is broken, the gas immediately expands into the other side (initially assumed to be evacuated), and we can easily tell the time reversed motion from the forward motion. In all of these cases, the motion at the individual molecule level is time reversal invariant, but it is clear that the gross motion of the macroscopic object is not.

Our question now is, "Why does nature seem to be time reversal invariant at the individual, or few, particle level, but apparently not at the level of many particles contained in an ordered system such as any common macroscopic object?" In classical physics, irreversibility is always due to the second law of thermodynamics, which determines the forward direction of time. The entropy of a system of moving horse or person, gravitational force, earth, and surroundings increases with time because the motion dissipates energy and increases the disorder in the body, earth, and surroundings. The forward direction of a falling cup is apparent after the cup hits the floor and breaks because the broken cup is more disordered (has higher entropy) than the unbroken cup. However, even before the cup breaks, the entropy of the combined system of cup, gravitational force, and earth increases as the cup falls.

Question: How is it possible that the entropy of a system of falling cup, gravitational force, and earth increases even before the cup breaks? Assume that the earth is a collection of a large number of particles that are in thermal equilibrium at all times, i.e., that the energy of tidal motion is constantly being converted into heat energy.

2.4. Electromagnetism

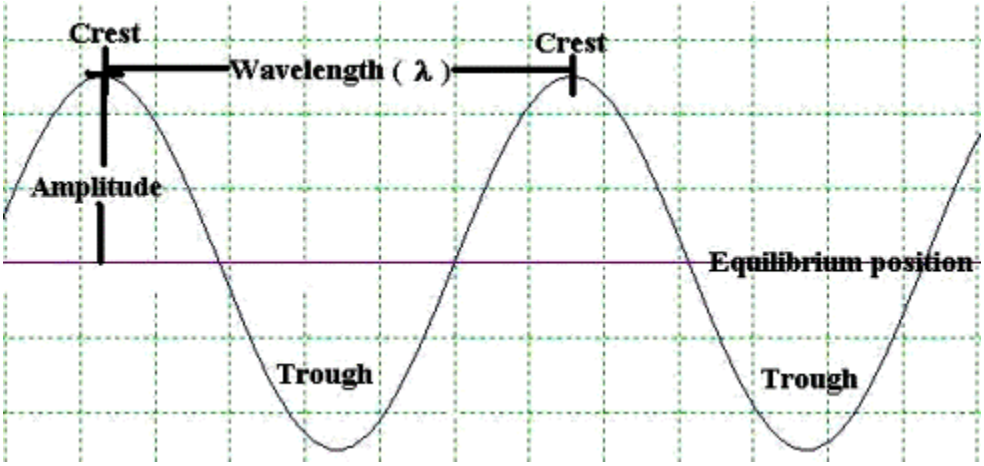
French physicist Charles Augustin de Coulomb (1736 - 1806) discovered the force law obeyed by stationary, electrically charged objects between 1785 and 1791. In 1820, Danish physicist Hans Christian Oersted (1777 - 1851) discovered that an electric current produces a magnetic field, and that a magnetic field exerted a force on a current-carrying wire. From 1820 to 1827, French physicist Andre Ampere (1775 - 1836) extended these discoveries and developed the mathematical relationship describing the strength of the magnetic field as a function of current. In 1831, English chemist and physicist Michael Faraday (1791 - 1867) discovered that a changing magnetic field, which he explained in terms of changing magnetic lines of force, produces an electric current in a wire. This was a giant step forward because it was the forerunner of the concept of force fields, which are used to explain all forces in nature today. A computer simulation of the force on an electric charge is given at http://ephysics.physics.ucla.edu/physlets/1.1/e_electric_field.htm.

In 1873, these disparate phenomena and theories were all pulled together into one elegant theory by Scottish physicist James Clerk Maxwell (1831 - 1879). Maxwell's four equations describing the electromagnetic field are recognized as one of the greatest achievements of 19th century physics. Maxwell was able to calculate the speed of propagation of the electromagnetic field from his equations, and found it to be approximately equal to the speed of light. He then proposed that light is an electromagnetic phenomenon. Because electromagnetic fields can oscillate at any frequency, he concluded that visible light occupied only a very small portion of the frequency spectrum of electromagnetic radiation. The entire spectrum includes radio waves of low-frequency, high-frequency, very-high frequency, ultra-high frequency, and microwaves. At still higher frequencies are infrared radiation, visible light, ultraviolet radiation, x-rays, and gamma rays. All of these are fundamentally the same kind of waves, the only difference between them being the frequency of the radiation (see next section).

Now we ask, what is the electromagnetic field, anyway? Is it a physical object? To answer that question, we must understand what we mean by the term physical object. One definition is that it is anything that carries force, energy, and momentum. By this definition the electromagnetic field is a physical object because it carries force, energy, and momentum. However, this merely defines the electromagnetic field in terms of other things that require their own definitions. Force, energy, and momentum can only be defined in terms of the operations necessary to measure them and these operations require physical objects on which to make the measurements. Thus, all physical objects are defined in terms of other physical objects, so the definition is circular. This is another indication that the concept of objective reality is nothing but a concept (see Section 1.1).

2.5. Waves

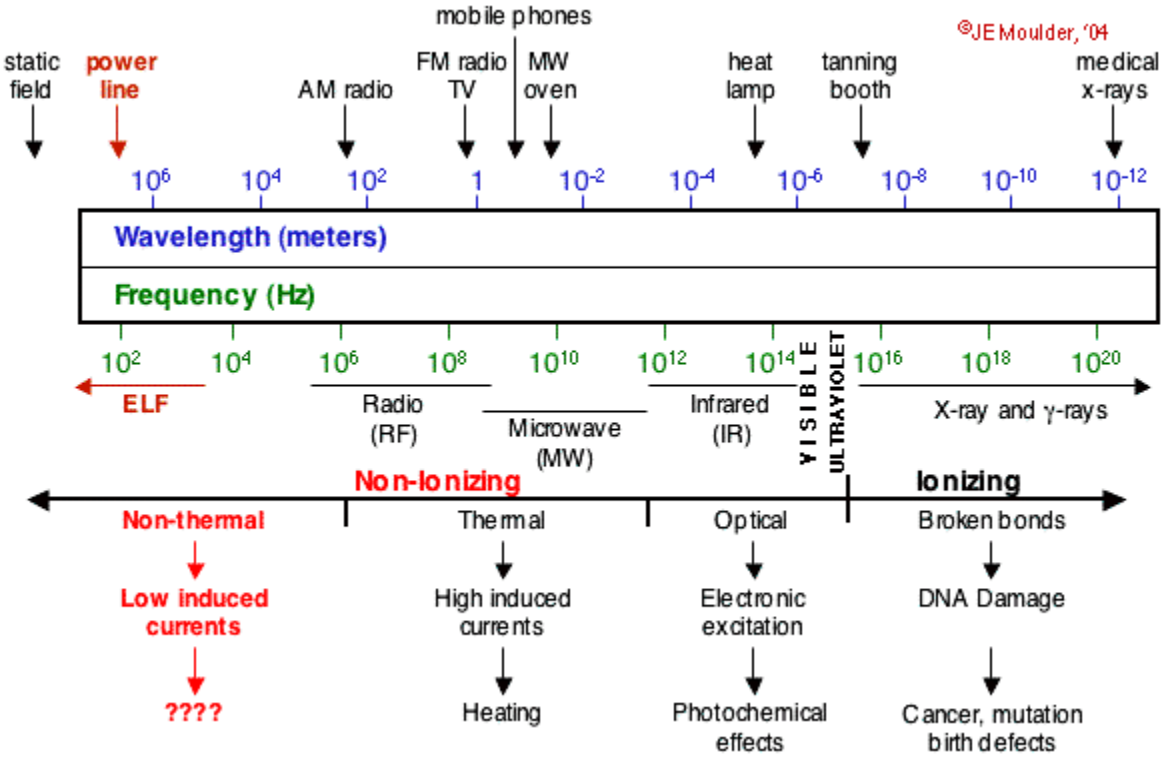
In the 1800s, it was known that light had a wave-like nature, and classical physics assumed that it was indeed a wave. Waves are traveling oscillations. Examples are water waves, which are traveling surface oscillations of water; and waves on a tightly stretched rope, which are traveling oscillations of the rope. Waves are characterized by three parameters: wavelength (λ), oscillation frequency (f), and velocity (v).



These parameters are related by the following equation:

$$v=\lambda f$$

The electromagnetic spectrum (see previous section) contains electromagnetic waves of all frequencies and wavelengths:



Waves are demonstrated at http://www.surendranath.org/Applets.html (→Waves→Transverse Waves) and http://www.colorado.edu/physics/2000/index.pl (Table of Contents→Science Trek→Catch the Wave).
It was not known what the oscillating medium was in the case of light, but it was given the name “ether.” Maxwell had assumed that the ether provided an absolute reference frame with respect to which the velocity of any object or wave could be measured.

In 1881, German-American physicist Albert Michelson (1852 - 1931) and American physicist Edward Morley (1828 - 1923) performed groundbreaking experiments on the velocity of light. They found that the velocity of light on the earth always had the same constant value regardless of the direction of motion of the earth about the sun. This violated the concept, which was prevalent at the time, that the measured velocity of any object, be it particle or wave, depends on the observer’s velocity relative to the velocity of the other object. This concept is demonstrated in everyday life when our perception of another car’s velocity depends on the velocity of our own car. Thus, the measured velocity of light relative to the ether was expected to depend on the direction of motion of the earth relative to the velocity of the ether. But, the constancy of the velocity of light meant that the concept of the ether had to be abandoned because the ether velocity could not be expected to change with the observer’s velocity in just such a way that the velocity of light always had the same value. Thus, in the case of light waves, physicists concluded that there is no material medium that oscillates.

Question: Give some examples of waves whose observed velocities depend on the observer velocity.
Give some examples of waves whose observed velocities do not depend on the observer velocity.

2.6. Relativity

Implicit in the preceding discussion of classical physics was the assumption that space and time were the contexts in which all physical phenomena took place. Until 1905, physicists assumed that space and time were absolute in the sense that no physical phenomena or observations could affect them, therefore they were always fixed and constant. Newton thought this assumption was necessary for his laws of motion to be valid and until 1905, no physicist doubted its validity.

In 1905, the German-Swiss-American physicist Albert Einstein (1879 - 1955) revolutionized these ideas of time and space by publishing his theory of special relativity. ("Special" means that all motions are uniform, i.e., with constant velocity.) In this theory, he abandoned the concept of the ether, and with it the concept of the absolute motion of an object, realizing that only relative motion between objects could be measured. Using only the assumptions that the observed velocity of light in free space is constant, and that the laws of motion are the same in all reference frames moving with constant velocity, he showed that neither length nor time is absolute. This means that both length and time measurements depend on the relative velocities of the observer and the observed.

An observer standing on the ground measuring the length of an airplane that is flying by will obtain a minutely smaller value than that obtained by an observer in the airplane. An observer on earth comparing a clock on a spaceship with a clock on earth will see that the spaceship clock moves slower than the earth clock. (Of course, an observer on the spaceship sees the earth clock moving slower than his clock! This is the famous twin paradox. It is resolved by realizing that, when the spaceship returns to earth, the spaceship observer and clock will have aged less than the earth observer and clock. The difference between the two observers is that the spaceship has undergone deceleration in order to come to rest on earth. This deceleration, which is negative acceleration, is nonuniform motion; therefore special relativity does not apply.)

For an object having a nonzero rest mass, the special theory produced the famous relationship between the total energy (E) of the object, which includes its kinetic energy, and its mass (m):

$$E = mc^2$$

where c is the speed of light in a vacuum. Einstein's special theory has been confirmed by thousands of experiments, both direct and indirect.

In Einstein's special theory of relativity, even though space and time were no longer absolute, they were still Euclidean. This meant that two straight lines in space-time (e.g., in an x,y,z,t coordinate system) which were parallel at one point always remained parallel no matter what the gravitational forces were.

Question: Suppose there is an ether. How would that affect Einstein's special theory of relativity?

Question: Suppose the special theory of relativity had been proven wrong. What would be the effect on your life now?

In 1915, Einstein completed his greatest work, the general theory of relativity. Whereas the special theory deals with objects in uniform relative motion, i.e., moving with constant speed along straight lines relative to each other, the general theory deals with objects that are accelerating with respect to each other, i.e., moving with changing speeds or on curved trajectories. Examples of accelerating objects are an airplane taking off or landing, a car increasing or decreasing its speed, an elevator starting up or coming to a stop, a car going around a curve at constant speed, and the earth revolving around the sun or the moon revolving around the earth at constant speed.

A particularly important example of acceleration is that of an object free-falling in the earth's gravity. A free-falling object is one that is acted upon only by the gravitational force, without air friction or other forces. All free-falling objects at the same spot in the earth's gravitational field fall with the same acceleration, independent of the mass or material of the object. A free-falling object, such as an astronaut in a spaceship, does not experience a gravitational force (i.e., he/she experiences weightlessness), hence we can say that the acceleration of free-fall cancels out the gravitational force. Another way to state this fact is that a gravitational force is equivalent to an acceleration in the same direction. This is Einstein's famed equivalence postulate, which he used in inventing general relativity.

The equivalence postulate applies to all objects, even light beams. Consequently, the path of a light beam is affected by a gravitational field just like the trajectory of a baseball. However, because of the very high speed of the photons in a light beam (3×10^8 meters/second, or 186,000 miles/second), their trajectories are bent by only very tiny amounts in the gravitational fields of ordinary objects like the sun.

Because all types of objects are affected in exactly the same way by gravity, an equivalent way of looking at the problem is to replace all gravitational forces by curved trajectories. The curved trajectories are then equivalent to curving space itself! This is the second key concept that Einstein used in the general theory of relativity. The result is that the general theory replaces the concept of gravity with the curvature of space. The curvature of a light beam around an individual star or galaxy is very small and difficult to measure. Even the whole universe curves the trajectory of a light beam only a little.

Question: Near the earth, how is space curved--towards the earth, away from the earth, or not at all?

Clear evidence that the force of gravity is nothing but a concept is given by the fact that it can be replaced by another concept, the concept of the curvature of space. Less clear is that the body sensations that we normally associate with the force of gravity (see Section 2.2) are also purely mental. We shall see more generally what we mean by the mind in Section 9.2.

General relativity also predicts the existence of black holes, objects that are so massive but so tiny that space around them curves into them. A light beam that gets close enough to a black hole will be bent into the black hole and never escape.

A fundamental feature of general relativity is that it predicts that matter, energy, space, and time depend on each other and evolve together so that space and time are not independent quantities. But, what are they, anyway? In the same way that we said in Section 2.4 that the electromagnetic field is nothing but a concept, and we said above that gravity is nothing but a concept, we can now say that space and time are also nothing but concepts! Space is a concept that allows us to conceptualize the separation of objects (which are nothing but concepts) and allows us to predict the trajectories of light beams (which are also nothing but concepts). Time is a concept that allows us to conceptualize how objects change (with time!). We shall say much more about conceptualization in Section 9.2, and the conceptualization of space and time in Chapter 12.

The average mass density of the universe cannot be measured directly because we are unable to see matter that is not emitting light, so the average mass density in a galaxy, for example, must be calculated from the trajectories of the motion of visible stars in the galaxy. Such measurements indicate that there is a large amount of matter in the universe that does not shine with its own or reflected light. This is called dark matter.

In 1929, 14 years after Einstein published his general theory of relativity, American astronomer Edwin Hubble (1889 - 1953) discovered that the universe is expanding. Until 1998, it was assumed that the expansion rate is constant, but in 1998 it was discovered that the universe is actually expanding at an increasing rate rather than a constant one. This acceleration cannot be explained if the universe contains only ordinary and dark matter because these produce a gravitational force which is attractive, whereas an accelerating expansion requires a repulsive force. This repulsive force represents a "dark energy" density in addition to the energy densities of ordinary and dark matter. Both dark matter and dark energy are presently being intensively investigated theoretically and experimentally because they could be the result of new physical laws operating.

Speaking of the universe as a whole, what are the effects of curved space? An important effect is that light beams no longer travel in straight lines. Hence, if two light beams start out parallel, they will eventually either converge or diverge. If they diverge, we say that space has negative curvature, and if they converge, we say that it has positive curvature. Zero curvature corresponds to parallel light beams always remaining parallel. This implies a Euclidean, or flat, space.

On February 11, 2003, C.L. Bennett and D.N. Spergel reported (Science News, February 15, 2003) a new map of the early universe as recorded by NASA's WMAP satellite. By measuring minute temperature nonuniformities in the cosmic microwave background, researchers deduced that only 4 percent of the universe is ordinary matter, while 23 percent is cold dark matter, and 73 percent is dark energy. These data, refined by quasar measurements in 2004, indicated that the universe is flat and that its age is 13.7±0.2 billion years, the most accurate measurement to date. However, this estimate of the curvature depended on the assumption that the universe is expanding at a constant rate.

There are powerful theoretical reasons for believing that the curvature of our space is neither positive nor negative but is exactly zero. The curvature depends on the average energy density (the average amount of energy per cubic meter), the expansion rate of the universe, and the rate of increase in the expansion rate. In practice, it is too difficult to measure the curvature by measuring the curvature of light beam trajectories, but it can be estimated if the average angular size of the intensity spots in the cosmic microwave background, the expansion rate of the universe, and the rate of increase in the expansion rate are all known (http://www.computerweekly.com/Articles/2009/08/08/237229/The-fate-of-the-cosmos-Dark-energy-can-shape-the-universe.htm).

[Side note: In his initial papers, Einstein had constructed a model of the universe with zero curvature that was not expanding at all. Later, in 1922 but also before Hubble's discovery, Russian physicist Aleksandr Friedmann (1888 - 1925) discovered solutions to the general relativity equations that described an expanding universe with either positive or negative curvature. Still later, in 1932 after Hubble's discovery, Einstein and W. de Sitter constructed a model that described an expanding universe with zero curvature.]

Question: Suppose there was no dark matter. What would be the observable result?

Question: Suppose there was no dark energy. What would be the observable result?

In inventing the special theory of relativity, Einstein was heavily influenced by the positivism of Austrian natural philosopher Ernst Mach (1838 - 1916). Positivism is the philosophy that states that the only authentic knowledge is knowledge that is based on actual sense experience. This attitude is derived from the belief that the only objective, external reality that exists is one that can be directly observed with the senses, such as macroscopic objects. In inventing and explaining the special theory, Einstein followed the positivist approach and made extensive use of the empirical definitions of measurements of time and space, and he incorporated those definitions into the mathematics, which describe how length and time vary with the relative velocity of observer and observed. In this way, Einstein was able to avoid the concept of space except as being the context of measurements of length and time.

However, Einstein abandoned positivism when he developed the general theory of relativity, and it is unlikely that he could have developed it without doing so. His concept of general relativity depended essentially on an intuitive leap from the empirical operations of measuring the force of gravity and the accelerations of objects to a theoretical model of space which was curved and in which there were no gravitational forces. He likely could not have done this without believing that space was objectively real rather than being merely the context for making measurements of length and time.

Question: Suppose the general theory of relativity had been proven wrong. What would be the effect on your life now?

In addition to curved space, a physicist who adhered to the positivist philosophy would not have conceived the electron, the atom, or quantum waves. Einstein's intuitive leap is an example of an essential aspect of the work of scientists. The individual experiments that

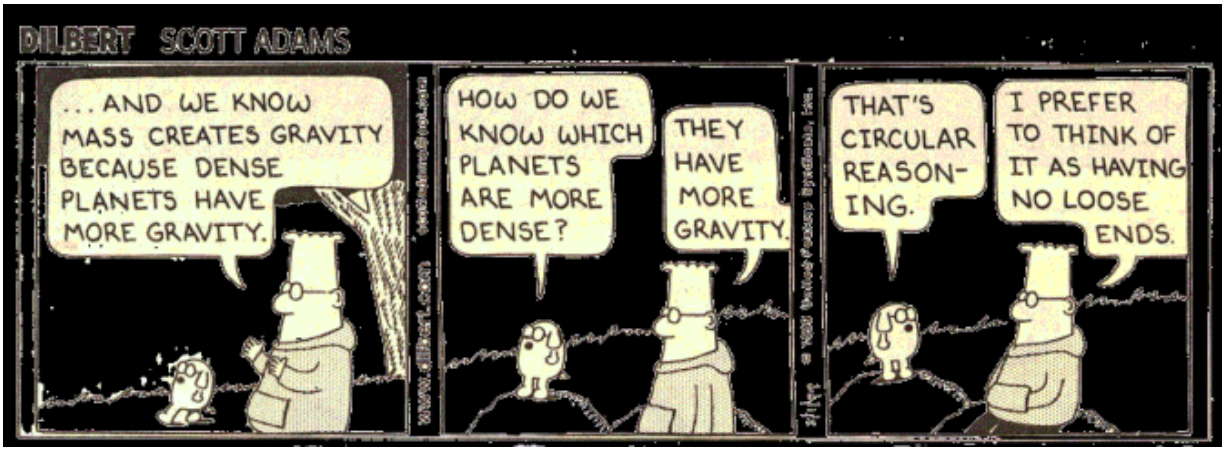
scientists perform are always very specific to a particular problem in particular circumstances. Any attempt to comprehend the results of many such experiments on many similar topics would be futile without some kind of unifying model that is presumed to represent some aspect of the external, objective reality affecting those experiments.

For example, force fields are theoretical models of gravitational or electromagnetic forces, and curved space-time is a model of space-time that accounts for the gravitational force. There are other models that account for the weak and strong forces that act on elementary particles. And there are models of the nucleus, the atom, molecules, crystals, and gases. All of these models are highly mathematical because mathematics is the universal language of physics.

When a model is found that accurately accounts for experimental observations, there is a strong tendency to think of the model itself as the external, objective reality. Thus, both physicists and the general public routinely speak of elementary particles, nuclei, atoms, and space-time as being real objects, rather than simply as mathematical models. We shall see later that this tendency creates intractable problems in trying to understand the true nature of Reality.

Question: From your own experience alone, answer the question, what is space, anyway?

In classical physics, objects interact with each other through their force fields, which are also objects in external, objective reality. For example, the atoms and molecules in a solid, liquid, or gas are held together by the electromagnetic force. Charged particles also interact through the electromagnetic force. It turns out that all physical objects, which are nothing but concepts, interact with each other through their force fields, which are also nothing but concepts (see Section 2.4).



As revolutionary as Einstein's general theory of relativity was, it did nothing to change the belief that we as observers still live within the context of space-time even though space-time is no longer thought to be absolute and unchanging. This means, for example, that we as objects are still subject to the experience of separation and isolation from other objects, and to the experience of aging and the ultimate death of the body. It took an even more revolutionary theory, the quantum theory, to begin to shake these imprisoning beliefs.

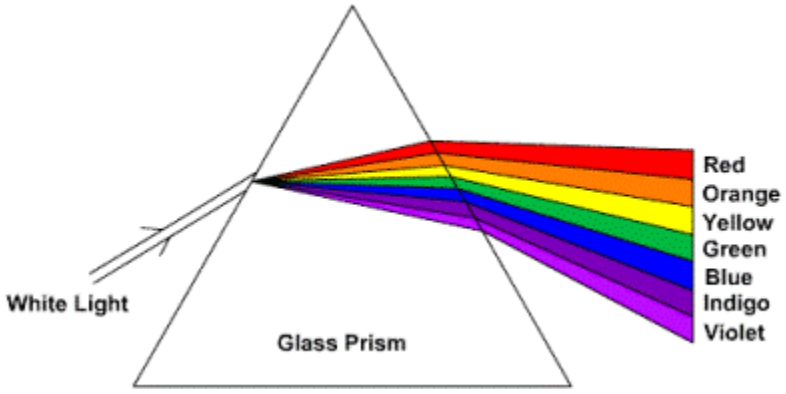
1. Exercise: View the video of the Hubble telescope's first 15 years of observations at http://imgsrc.hubblesite.org/hu/gallery/db/video/hm_15th_anniversary/formats/hm_15th_anniversary_640x480.mov
2. Questions: What is the Hubble viewing? Stars? Galaxies? Space? A mathematical concept? Consciousness? Ourselves? Nothing?

Questions: From your own experience, and with a minimum of concepts, be as specific and as accurate as possible in answering the following questions. Avoid the use of simple synonyms. What is the gravitational force? An example of an unsuitable answer is “a force that pulls me down and holds me to my chair”. This example offends by repeating the word “force” and it uses the concepts “pulls”, “me”, “down”, “holds” “my”, and “chair”. Another unsuitable answer is “curved space” because it is a synonym and is not an experience.

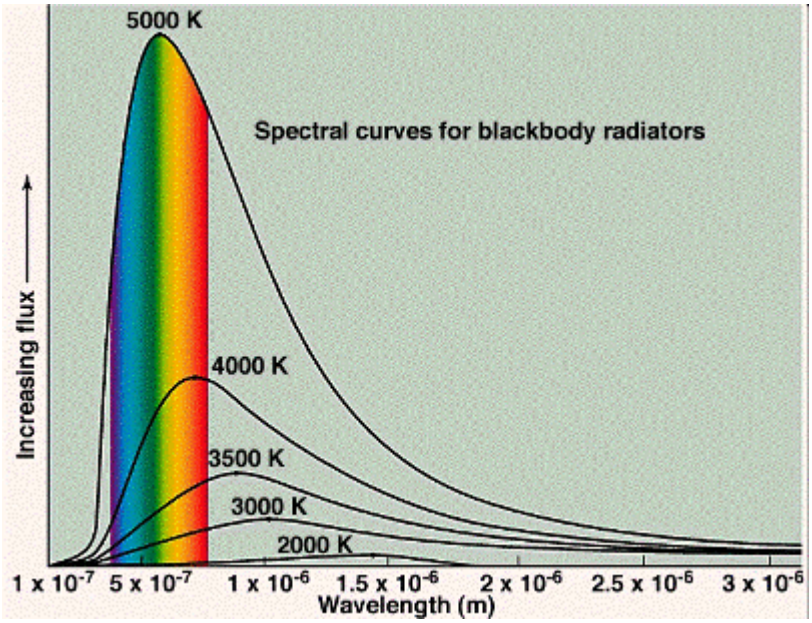
Chapter 3. Quantum physics from Planck and Einstein to Bohr, Heisenberg, de Broglie, and Schrödinger

3.1. The beginning of quantum physics by Planck and Einstein

Physicists measure the spectrum (the intensity of light as a function of wavelength, or color) of a light source in a spectrometer. The figure below shows a schematic drawing of a simple prism spectrometer. White light comes in from the left and the prism disperses the light into its color spectrum.

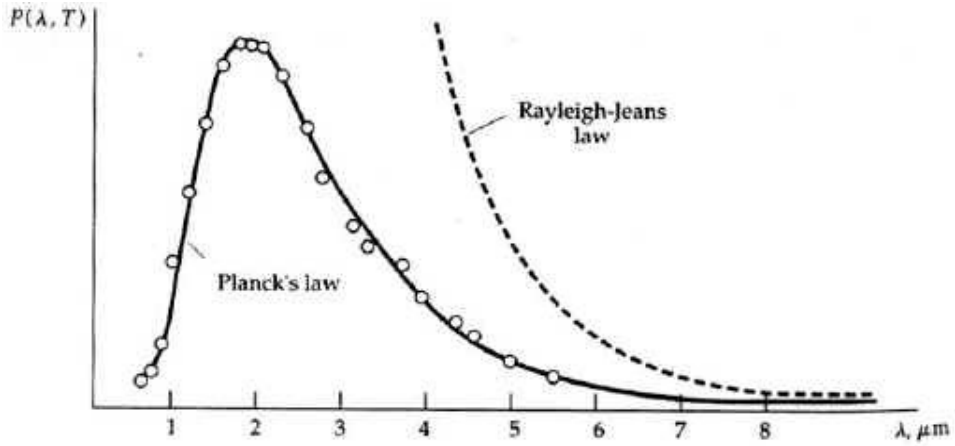


In the late 1800s, physicists were making accurate measurements of the spectra of the emissions from black bodies (objects which are opaque, or highly absorbing, to the light they emit). Good examples of black bodies are the sun, the filament of an incandescent lamp, and the burner of an electric stove. The color of a black body depends on its temperature: A cool body emitting radiation of long wavelengths, i.e., in the radio frequency range or in the infrared which are invisible to the eye, a warmer body emitting radiation which includes shorter wavelengths and appearing deep red, a still warmer body emitting radiation which includes still shorter wavelengths and appearing yellow, and a hot body emitting even shorter wavelengths and appearing white. The emissions are always over a broad range of colors, or wavelengths, and their appearance is the net result of seeing all of the colors at once. Examples of various blackbody spectra are shown below. Computer simulations are given at http://ephysics.physics.ucla.edu/physlets/eblackbody.htm..



Question: According to the above definition, is your body a black body? Note: The human body can be seen in pitch darkness with thermal imaging goggles.

Classical physics could not explain the spectra of black bodies. It predicted that the intensity (power emitted at a given wavelength) of emitted light should increase rapidly with decreasing wavelength without limit (the “ultraviolet catastrophe”). In the figure below, the curve labeled “Rayleigh-Jeans law” shows the classically expected behavior.

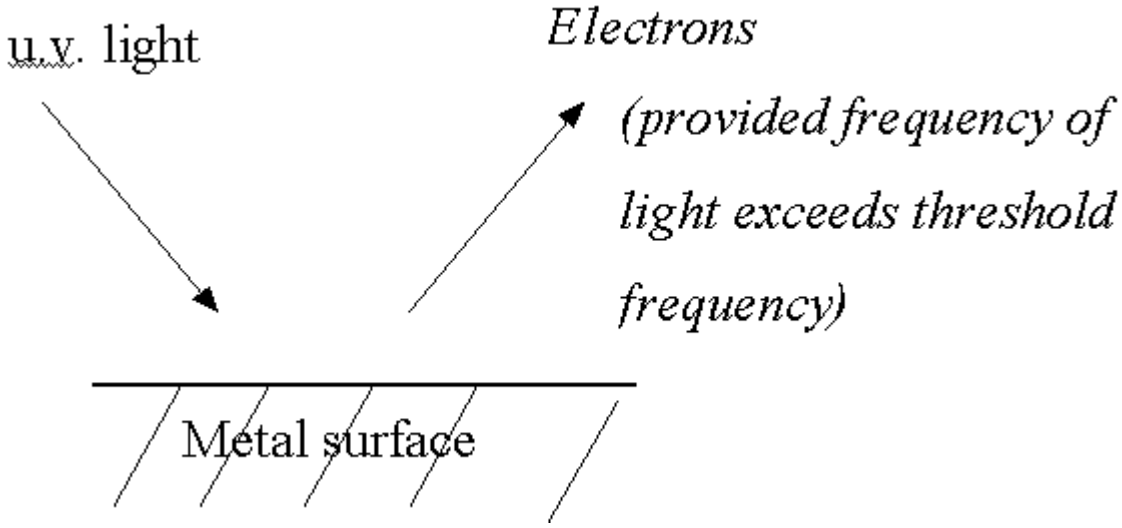


However, the measured spectra actually showed an intensity maximum at a particular wavelength, while the intensity decreased at wavelengths both above and below the maximum. In order to explain the spectra, in 1900 the German physicist Max Planck (1858 - 1947) was forced to make a desperate assumption for which he had no physical explanation. As with classical physics, he assumed the body consisted of vibrating oscillators (which were actually collections of atoms or molecules). However, in contrast to classical physics, which assumed that each oscillator could absorb an arbitrary amount of energy from the radiation or emit an arbitrary amount of energy to it, Planck was forced to assume that each oscillator could receive or emit only discrete, quantized energies (E), such that

$$E = hf \qquad \text{(Planck's formula)}$$

where h (Planck's constant) is an exceedingly small number whose value we do not need here, and f is the frequency of vibration of the oscillator (the number of times it vibrates per second). Each oscillator is assumed to vibrate only at a fixed frequency (although different oscillators in general had different frequencies), so if it emitted some radiation, it would lose energy equal to hf, and if it absorbed some radiation, it would gain energy equal to hf. Planck did not understand how this could be, he merely made this empirical assumption in order to explain the spectra. The figure above shows Planck's prediction; this agreed with the measured spectra.

Also in the late 1800s, experimental physicists were measuring the emission of electrons from metallic objects when they shined light on the object. This is called the photoelectric effect. These experiments also could not be explained using classical concepts. These physicists observed that emission of electrons occurred only for light wavelengths shorter than a certain threshold value that depended on the metal. Classically, however, one expected that the emission should not depend on wavelength at all, but only on intensity, with greater intensities yielding more copious emission of electrons. A computer simulation of the photoelectric effect is given at http://phet-web.colorado.edu/web-pages/simulations-base.html (→Quantum Phenomena→Photoelectric Effect). The diagram below illustrates the effect.

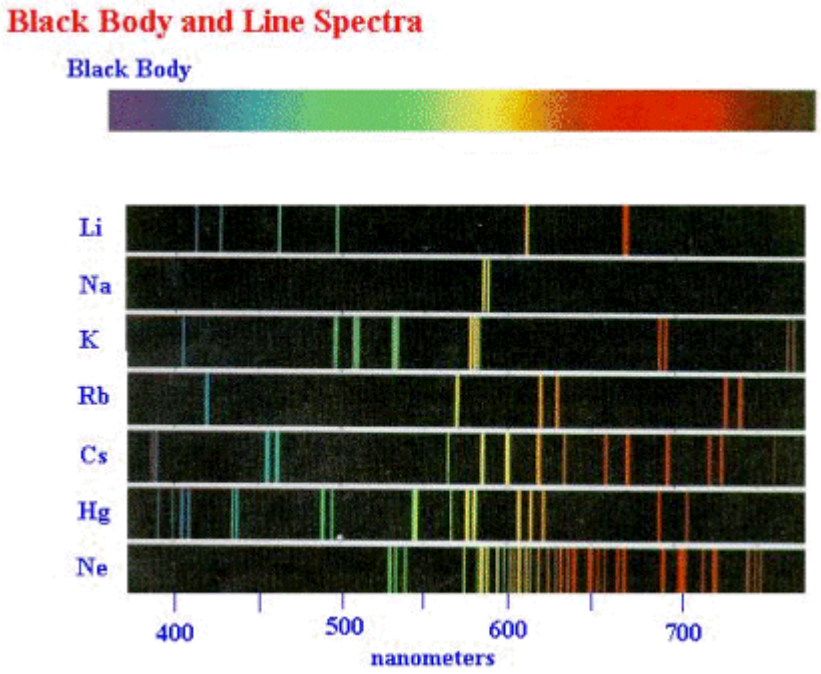


In one of a famous series of papers in 1905, Einstein explained the photoelectric effect by starting with Planck's concept of quantized energy exchanges with light radiation, and making the startling assumption that these quantized exchanges were a direct result of the quantization of light itself, i.e. light consisted of discrete bundles of energy called photons, rather than the continuous waves that had always been assumed in classical physics. However, these bundles still had a wave nature, and could be characterized by a wavelength, which determined their color. He also used Planck's relationship between energy and frequency (E = hf) to identify the energy of the photon, and he used the relationship between velocity, frequency, and wavelength that classical physics had always used (v=lf, where now v=c= velocity of light). Einstein received the Nobel Prize for this paper (not for his theories of relativity!).

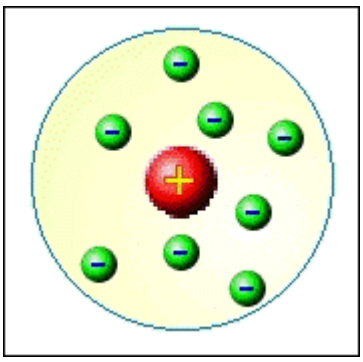
In classical physics, the electromagnetic field connects charged particles to each other (see Sections 2.4, 2.6). In quantum physics, the force fields of classical physics are quantized, and the quanta of the fields then become the force carriers. For example, photons are the quanta of the electromagnetic field. In quantum physics, it is the photons that connect charged particles to each other.

3.2. The development of quantum mechanics by Bohr, Heisenberg, de Broglie and Schrödinger

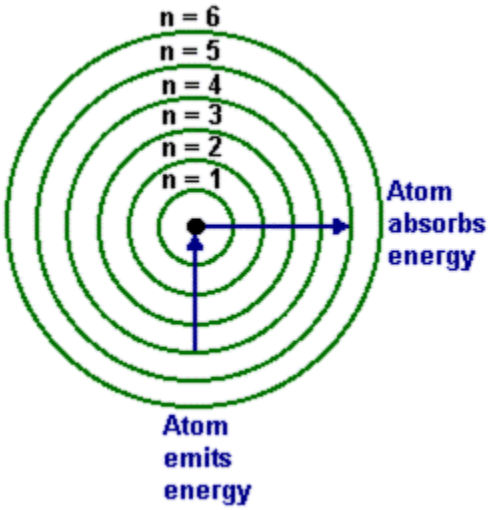
In addition to measuring the spectra of blackbody radiation in the 19th century, experimental physicists also were familiar with the spectra emitted by gases through which an electrical discharge (an electric current with enough energy to strip some of the electrons from the atoms of the gas) was passing. Examples of such discharges are the familiar neon sign, in which the gas is neon; and the fluorescent light bulb, in which the gas is mercury vapor (the fluorescent light bulb has special coatings on the inner walls which change the spectrum of the light). The spectra of such light sources consist of emissions at discrete, separated wavelengths, rather than over a continuous band of wavelengths as in blackbody spectra. These spectra are called line spectra because of their appearance when they are viewed with a spectrometer (see Section 3.1 and figure below). A simulation applet of line spectra can be found at http://jersey.uoregon.edu/vlab/elements/Elements.html.



Line spectra are another example of phenomena that could not be explained by classical physics. Indeed, the explanation could not come until developments in the understanding of the structure of atoms had been made by New Zealander physicist Ernest Rutherford (1871 - 1937) and coworkers in 1911. By scattering alpha particles (i.e., helium nuclei, which consist of two protons and two neutrons bound together) from thin gold foils, they discovered that the gold atom consisted of a tiny (10^{-15} meters) very dense, positively charged nucleus surrounded by a much larger (10^{-10} meters) cloud of negatively charged electrons, see figure below. (Quantum mechanically, this picture is not correct, but for now it is adequate.)



When classical physics was applied to such a model of the atom, it predicted that the electrons could not remain in stable orbits about the nucleus, but would radiate away all of their energy and fall into the nucleus, much as an earth satellite falls into the earth when it loses its kinetic energy due to atmospheric friction. In 1913, after Danish physicist Niels Bohr (1885 - 1962) had learned of these results, he constructed a model of the atom that made use of the quantum ideas of Planck and Einstein. He proposed that the electrons occupied discrete stable orbits without radiating their energy. The discreteness was a result of the quantization of the orbits, with each orbit corresponding to a specific quantized energy for the electron. The electron was required to have a certain minimum quantum of energy corresponding to a smallest orbit; thus, the quantum rules did not permit the electron to fall into the nucleus. However, an electron could jump from a higher orbit to a lower orbit and emit a photon in the process. The energy of the photon could take on only the value corresponding to the difference between the energy of the electron in the higher and lower orbits. An electron could also absorb a photon and jump from a lower orbit to a higher orbit if the photon energy equaled the difference in orbit energies, see figure below. Computer animations of the Bohr model of photon emission and absorption in the hydrogen atom are given at http://www.upscale.utoronto.ca/PVB/Harrison/BohrModel/Flash/BohrModel.html and http://www.colorado.edu/physics/2000/index.pl (Table of Contents→Science Trek Applets→Bohr's Atom).



Bohr applied his theory to the simplest atom, the hydrogen atom, which consists of one

electron orbiting a nucleus of one proton. The theory explained many of the properties of the observed line spectrum of hydrogen, but could not explain the next more complicated atom, that of helium, which has two electrons. Nevertheless, the theory contained the basic idea of quantized orbits, which was retained in the more correct theories that came later.

In the earliest days of the development of quantum theory, physicists, such as Bohr, tried to create physical pictures of the atom in the same way they had always created physical pictures in classical physics. However, although Bohr developed his initial model of the hydrogen atom by using an easily visualized model, it had features that were not understood, and it could not explain the more complicated two-electron atom. The theoretical breakthroughs came when some German physicists who were highly sophisticated mathematically, Werner Heisenberg (1901 - 1976), Max Born (1882 - 1970), and Pascual Jordan (1902 - 1980), largely abandoned physical pictures and created purely mathematical theories that explained the detailed features of the hydrogen spectrum in terms of the energy levels and the intensities of the radiative transitions from one level to another. The key feature of these theories was the use of matrices instead of ordinary numbers to describe physical quantities such as energy, position, and momentum. (A matrix is an array of numbers that obeys rules of multiplication that are different from the rules obeyed by numbers.)

[Biographical notes: During World War II, Heisenberg worked on the German nuclear energy project. Whether his role in the project was purely scientific or whether he had political motives, either to work towards its success or towards its failure, is still a matter of controversy. No such controversy exists over the role of Jordan, who joined the Nazi party as a storm trooper in 1933, and the Luftwaffe in 1939 as a weather analyst. Born, on the contrary, after being classified as a Jew by the Nazis in 1933, left Germany and took a position at the University of Cambridge, returning to Germany only after the War.]

The step of resorting to entirely mathematical theories that are not based on physical pictures was a radical departure in the early days of quantum theory, but today in developing the theories of elementary particles it is standard practice. Such theories have become so arcane that physical pictures have become difficult to create and to visualize, and they are usually developed to fit the mathematics rather than fitting the mathematics to the picture. Thus, adopting a positivist philosophy would prevent progress in developing models of reality, and the models that are intuited are more mathematical than physical.

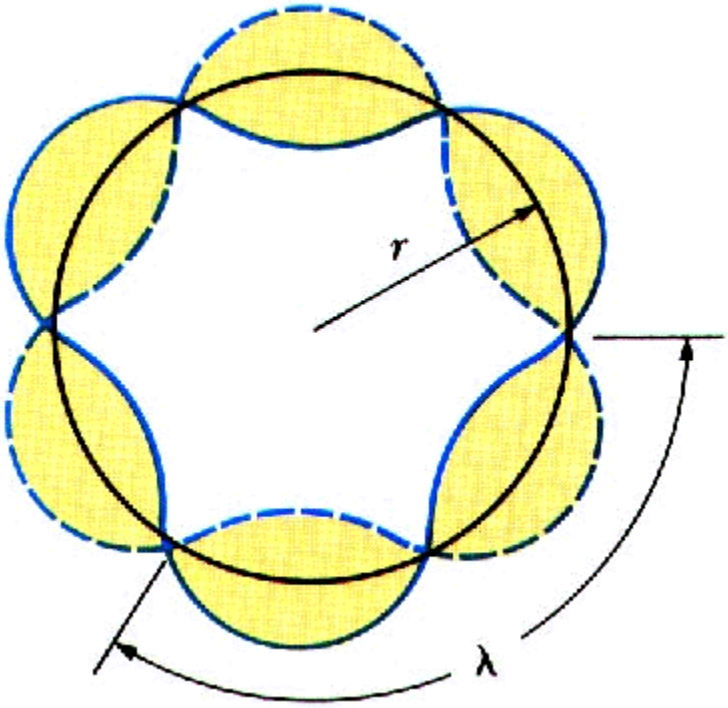
Nevertheless, in the early 1920s some physicists continued to think in terms of physical rather than mathematical models. In 1923, French physicist Louis de Broglie (1892 - 1987) reasoned that if light could behave like particles, then particles such as electrons could behave like waves, and he deduced the formula for the wavelength of the waves:

$$\lambda = h/p$$

where p is the momentum (mass x velocity) of the electron. Experiments subsequently verified that electrons actually do behave like waves in experiments that are designed to reveal wave nature. We will say more about such experiments in Chapter 4. A computer demonstration of de Broglie waves is given at http://www.colorado.edu/physics/2000/index.pl (Table of Contents→Science Trek→de Broglie's atom).

In physics, if there is a wave, there must be an equation that describes how the wave propagates in time. De Broglie did not find it, but in 1926 Austrian-Irish physicist Erwin Schrödinger (1887- 1961) discovered the celebrated equation that bears his name. The Schrödinger equation allows us to calculate precisely the Schrödinger wave at all points in space at any future time if we know the wave at all points in space at some initial time. In this sense, even quantum theory is completely deterministic.

Schrödinger verified his equation by using it to calculate the line emission spectrum from hydrogen, which he could do without really understanding the significance of the waves. In fact, Schrödinger misinterpreted the waves and thought they represented the electrons themselves, see figure below. However, such an interpretation could not explain why experiments always showed that the photons emitted by an atom were emitted at random rather than predictable times, even though the average rate of emission could be predicted from both Heisenberg's and Schrödinger's theories. It also could not explain why, when an electron is detected, it always has a well-defined position in space, rather than being spread out over space like a wave.



The proper interpretation was discovered by German physicist Max Born (1882 - 1970) in 1926, who suggested that the wave (actually, the absolute value squared of the amplitude or height of the wave, at each point in space) represents the probability that the electron will appear at that specified point in space if an experiment is done to measure the location of the electron. Thus, the Schrödinger wave is a probability wave, not a wave that carries force, energy, and momentum like the electromagnetic wave. Born's interpretation introduces two extremely important features of quantum mechanics:

1) From the wave, we can calculate only probabilities, not certainties (the theory is probabilistic, not deterministic).

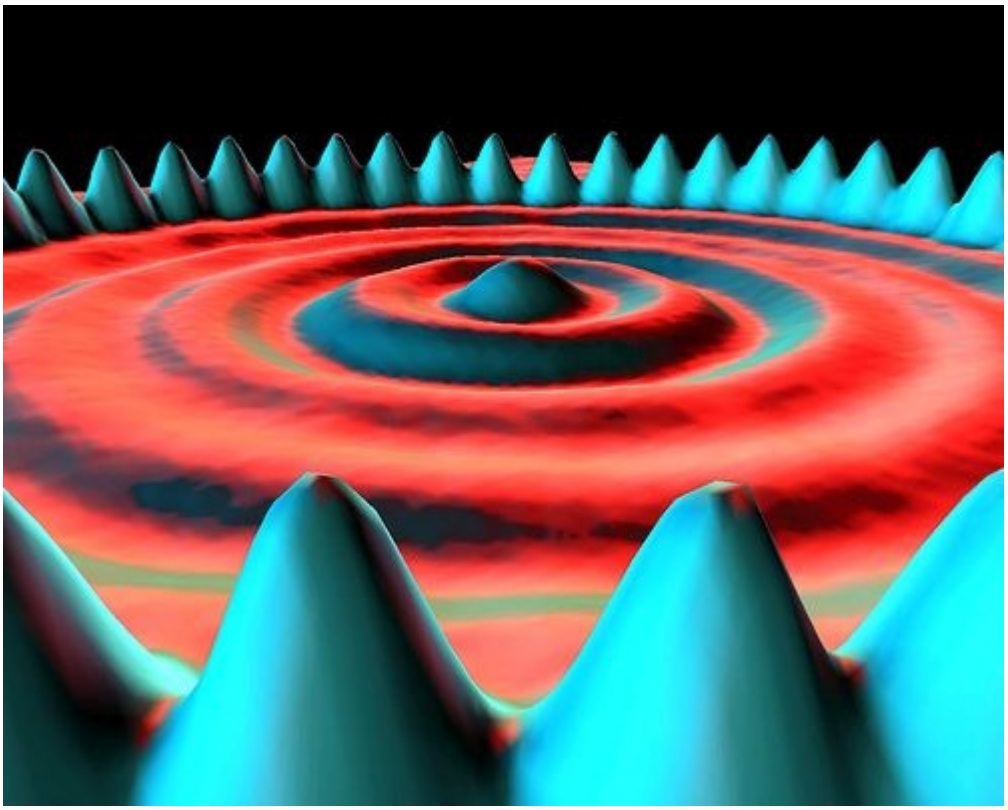
2) The wave only tells us the probability of finding something if we look, not what is there if we do not look. Quantum theory is not a theory of objectively real matter (although Born thought the Schrödinger wave was objectively real).

Questions: Suppose you accepted the principle that reality is probabilistic rather than deterministic. How would it affect your notions of free will? How would it affect your sense of control over your thoughts, feelings, decisions, and actions? How would it affect your perceptions of other people's control over their thoughts, feelings, decisions, and actions? How would it affect your judgments about yourself and others?

The first feature violates the second fundamental assumption of classical physics (see Section 2.2), i.e., that both the position and velocity of an object can be measured with no limits on their precision except for those of the measuring instruments. The second feature violates the first fundamental assumption of classical physics, i.e., that the objective world exists independently of any observations that are made on it.

3.3. A striking example of probability measurement

Probabilities can be measured using sophisticated instrumentation. A striking example is shown in the following diagram, measured with a scanning tunneling microscope, of the probabilities of the locations of 48 iron atoms circling the probabilities of the locations of a sea of electrons (http://picasaweb.google.com/IBMResearchAlmaden/IBMCelebrates20YearsOfMovingAtoms#5385522009881657778):



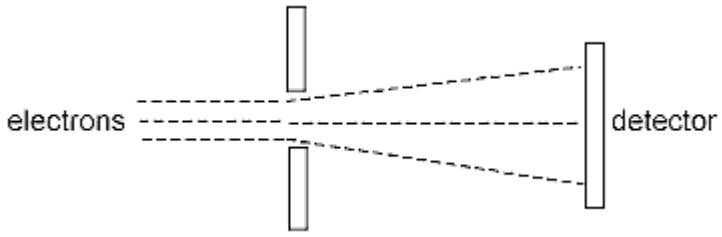
The terms "iron atom" and "electron" are heuristic attempts to give names to the locations. However, this diagram in no way proves that there are in reality such things as iron atoms and electrons. There is no way to prove that (see Section 1.1), but, by giving them names, we tend to be convinced that the objects actually exist.

The probability measurements are represented by points so densely packed that they appear to form surfaces rather than individual measurements. The "iron atoms" are seen to be most probably located under the blue peaks while the "electrons" are seen to be more diffusely located under the circular rings. These are probability measurements of locations only, not actual locations.

3.4. Uncertainty and complementarity

As Born proposed, quantum theory is intrinsically probabilistic in that in most cases it cannot predict the results of individual observations. However, it is deterministic in that it can exactly predict the probabilities that specific results will be obtained. Another way to say this is that it can predict exactly the average values of measured quantities, like position, velocity, energy, or number of electrons detected per unit time in a beam of electrons, when a large number of measurements are made on identical electron beams. It cannot predict the results of a single measurement. This randomness is not a fault of the theory--it is an intrinsic property of nature. Nature is not deterministic in the terms thought of in classical physics.

Another feature of the quantum world, the world of microscopic objects, is that it is intrinsically impossible to measure simultaneously both the exact position and momentum of a particle. This is the famous uncertainty principle of Heisenberg, who derived it using the multiplication rules for the matrices that he used for position and momentum. For example, an apparatus designed to measure the position of an electron with a certain accuracy is shown in the following diagram. The hole in the wall ensures that the positions of the electrons as they pass through the hole are within the hole, not outside of it.



So far, this is not different from classical physics. However, quantum theory says that if we know the position q of the electron to within an accuracy of Δq (the diameter of the hole), then our knowledge of the momentum p (=mass x velocity) at that point is limited to an accuracy Δp such that

$$(\Delta p)(\Delta q)>h \quad \text{(Heisenberg uncertainty relation).}$$

In other words, the more accurately we know the position of the electron (the smaller Δq is), the less accurately we know the momentum (the larger Δp is). Since momentum is mass times velocity, the uncertainty in momentum is equivalent to an uncertainty in velocity. The

uncertainty in velocity is in the same direction as the uncertainty in position. In the drawing above, the uncertainty in position is a vertical uncertainty. This means that the uncertainty in velocity is also a vertical uncertainty. This is represented by the lines diverging (by an uncertain amount) after the electrons emerge from the hole (uncertain vertical position) rather than remaining parallel as they are on the left.

Likewise, an experiment designed to measure momentum with a certain accuracy will not be able to locate the position of the particle with better accuracy than the uncertainty relationship allows.

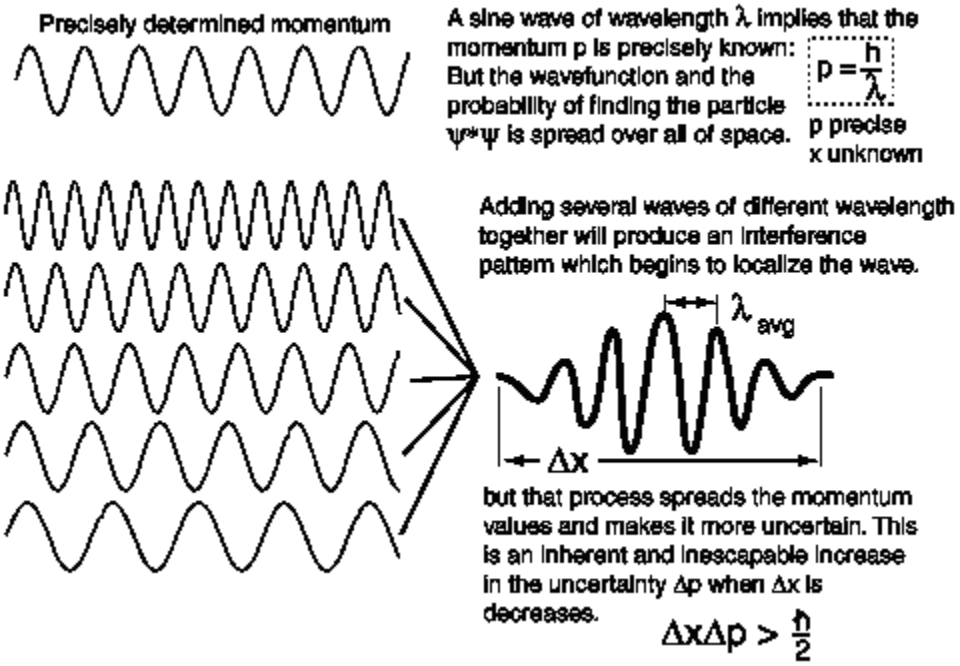
Notice that in the uncertainty relationship, if the right side equals zero, then both Δp and Δq can also be zero. This is the assumption of classical physics, which says that if the particles follow parallel trajectories on the left, they will not be disturbed by the hole, and they will follow parallel trajectories on the right.

If we divide both sides of the uncertainty relation by the mass m of the particle, we obtain

$$(\Delta v)(\Delta q)>h/m.$$

Here we see that the uncertainties in velocity v or position q are inversely proportional to the mass of the particle. Hence, one way to make the right side effectively zero is to make the mass very large. When numbers are put into this relationship, it turns out that the uncertainties are significant when the mass is microscopic, but for a macroscopic mass the uncertainty is unmeasurably small. Thus, classical physics, which always dealt with macroscopic objects, was close to being correct in assuming that the position and velocity of all objects could be determined arbitrarily accurately.

The uncertainty principle can be understood from a wave picture. A wave of precisely determined momentum corresponds to an infinitely long train of waves, all with the same wavelength, as is shown in the first of the two wave patterns below. This wave is spread over all space, so its location is indeterminate.



A wave of less precisely determined momentum can be obtained by superposing (see Section 4.1) waves of slightly different wavelength (and therefore slightly different momentum) together, as is shown in the second of the two patterns above. This results in a wave packet with a momentum spread Δp (uncertainty Δp), but which is bunched together into a region of width Δx (uncertainty Δx) instead of being spread over all space.

The uncertainty relation is closely related to the complementarity principle, which was first enunciated by Bohr. This principle states that quantum objects (objects represented by quantum wavefunctions) have both a particle and a wave nature, and an attempt to measure precisely a particle property will tend to leave the wave property undefined, while an attempt to measure precisely a wave property will tend to leave the particle property undefined. In other words, particle properties and wave properties are complementary properties. Examples of particle properties are momentum and position. Examples of wave properties are wavelength and frequency. A precise measurement of momentum or position leaves wavelength or frequency undefined, and a precise measurement of wavelength or frequency leaves momentum or position undefined.

Question: Suppose the complementarity principle is extended to macroscopic objects. For example, if your intent is to see a water wave, you see a water wave but not a water particle. If your intent is to see a water particle, you see a water particle but not a water wave. In other words, you see only what you intend to see. Can you think of any similar examples of this principle in your daily life?

We have seen that, even if the quantum wave function is objectively real, it is a probability wave, not a physical wave. Furthermore, complementarity and uncertainty strongly imply that the electron (or any other “particle”) exists neither as a physical particle nor a physical wave. But, if so, in what form does it exist? So far, we have neglected the role of the observer in all measurements. When we take the observer into account (see Chapter 6), we shall see that quantum theory does not require physical particles or waves (see also Section 1.1), but it

does require observations! We explore this provocative statement much further in later chapters.

Chapter 4. Waves and interference, Schrödinger's cat paradox, Bell's inequality

4.1. Waves and interference

Let us review the concept of the probability wave. The quantum wave does not carry energy, momentum, or force. Its sole interpretation is that from it we can calculate the probability that a measurement will yield a particular result, e.g., that photographic film will measure a specific position of an electron in an electron beam, or that a Geiger counter will yield a specific number of gamma rays from a radioactive source. It is only during a measurement that a particle appears. Prior to the measurement, what exists is not something that can be determined by either quantum theory or by experiment, so it is a metaphysical question, not a question of physics. However, that does not mean that the metaphysical answer does not have considerable impact in both the scientific world and one's personal world. We will say a good deal about such implications later.

Suppose we do an experiment in which machine gun bullets are fired at a wall with two holes in it (see the top panel in Figure 1). The probability P_{12} of finding a bullet from either hole at the backstop to the right of the wall is equal to the probability P_1 of finding a bullet from hole #1 plus the probability P_2 of finding a bullet from hole #2. The probability distributions are simply additive.

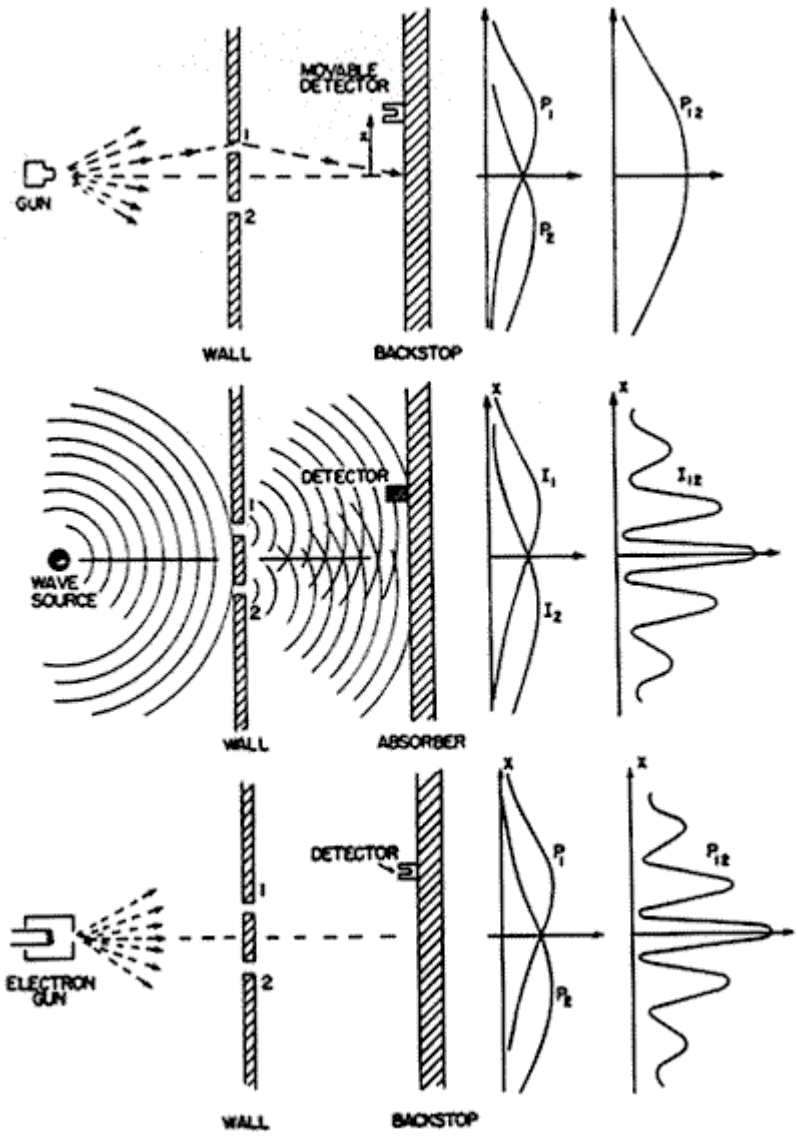
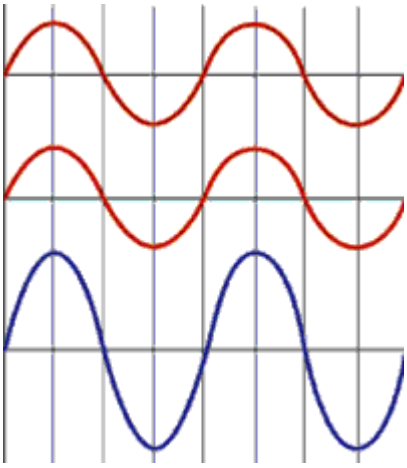
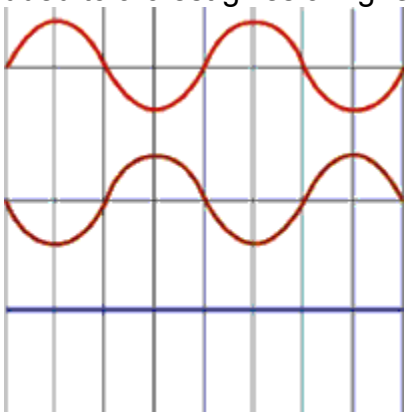


Figure 1

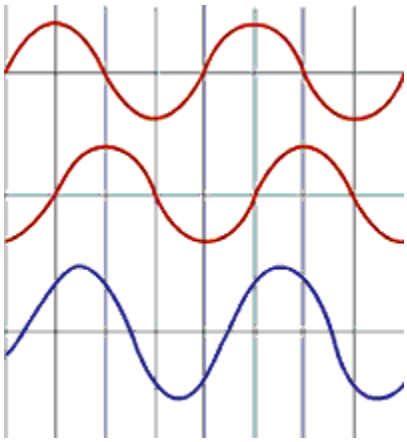
When we are dealing with waves, we have a different rule. The superposition principle is one that is obeyed by all waves in material media provided their amplitudes are not too great, and is rigorously obeyed by all electromagnetic waves and quantum waves. It says that **the net wave amplitude or height at any point in space is equal to the algebraic sum of the heights of all of the contributing waves**. In the case of water waves, we can have separate waves due to the wake of a boat, the splashing of a swimmer, and the force of the wind. At any point on the surface of the water, the heights of the waves add, but it is important to include the sign of the height, which can be negative as well as positive. The height of the trough of a water wave is negative while the height of a crest is positive. When a crest is added to a crest, the heights add to give a higher crest, as is shown below. When a trough is added to a crest, the heights tend to cancel. They cancel exactly if the heights of the crest and the trough are exactly equal but opposite in sign. When a trough is added to a trough, a deeper trough is created. When a crest is not lined up with either a crest or a trough, an intermediate wave is created.



Crest added to a crest gives a higher crest.

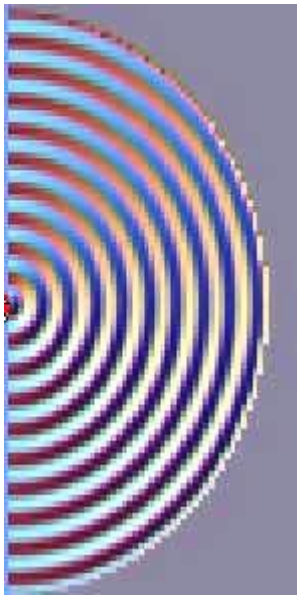


Crest added to a trough gives cancellation.



Two waves added out of phase give an intermediate wave.

A computer animation of the superposition of two waves is given in
http://www.phy.ntnu.edu.tw/ntnujava/viewtopic.php?t=35.
The superposition principle leads to the phenomenon of interference. The superposition, or sum, of two waves with the same wavelength at a point in space where both waves have either positive or negative heights results in a summed wave with positive or negative height greater than that of either one, as is shown below. This is called constructive interference. If the individual heights have opposite signs, the interference is destructive, and the height of the summed wave is smaller than the largest height of the two.



Looking down on a water wave. The bright lines are crests, the dark ones are troughs.

Interference of two water waves. Crests added to crests form higher crests. Troughs added to troughs form deeper troughs.

A computer simulation of a two-slit interference pattern using water waves is given in http://www.falstad.com/ripple/, and using light waves in http://www.walter-fendt.de/ph14e/doubleslit.htm and in http://www.colorado.edu/physics/2000/index.pl (Table of Contents→Atomic Lab→Classic Two-Slit Experiment).

An important measurable property of classical waves is power, or intensity I (power per unit area). Power is proportional to the square of the wave amplitude, and is always positive. Interference of classical waves is illustrated in the middle panel of Figure 1, where the intensity I_{12} at the absorber is plotted. Notice the radical difference between the graph of I_{12} for the water waves and the graph of P_{12} for the bullets. The difference is due to interference. Likewise, when we observe light waves, we also observe the intensity distribution, not the wave

amplitude. A computer animation of the comparison between particles and waves in a two slit experiment is shown at http://www.upscale.utoronto.ca/PVB/Harrison/DoubleSlit/Flash/DoubleSlit.html.

For quantum waves, we already know that the property that is proportional to the square of the wave amplitude is probability. We now need to find out what interference implies for the measurement of probabilities.

Let ψ_1 and ψ_2 be the amplitudes, or heights, of two probability waves representing indistinguishable particles measured at the same point in space. (In quantum theory, these amplitudes are generally complex quantities. For simplicity, here we assume they are real.) The sum of these two heights is simply $\psi = \psi_1 + \psi_2$, so the probability is

$$\psi^2 = (\psi_1 + \psi_2)^2 = \psi_1^2 + 2\psi_1\psi_2 + \psi_2^2 \qquad \text{(Eq. 1)}$$

This equation has a simple interpretation. The first term on the right is simply the probability that the first particle would appear if there were no interference from the second particle, and vice versa for the last term. Thus these two terms by themselves could represent the probabilities for classical particles like bullets, even though we do not ordinarily represent them by waves. If the middle term did not exist, this expression would then just represent the sum of two such classical probabilities. In the top panel of Figure 1, it would represent the probability that a bullet came through either the first hole or the second hole and appeared at a particular point on the screen. Figure 2 below shows the actual bullet impacts.

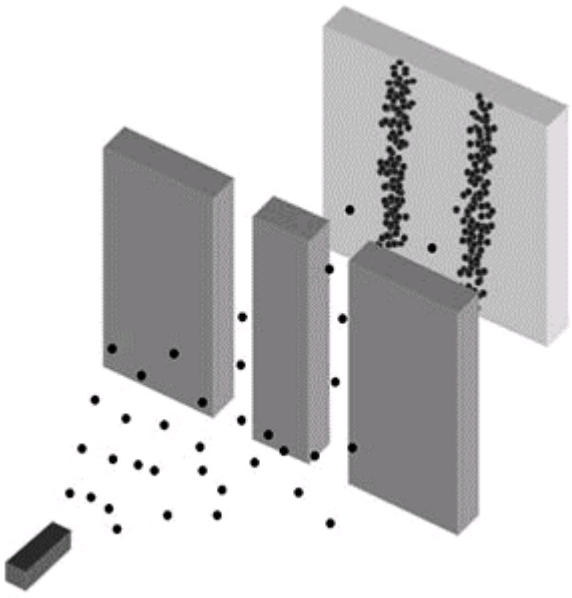


Figure 2

The middle term on the right of Eq. 1 is called the interference term. This term appears only for wave phenomena (including classical waves like water waves) and is responsible for destructive or constructive interference since it can be either negative or positive. If destructive interference is complete, the middle term completely cancels the other two terms (this will happen if $\psi_1 = -\psi_2$). Because of interference, the probability distributions for waves are completely different from those for bullets. The probability distribution for electrons, labeled P_{12}

in the bottom panel of Figure 1, has the same shape as the intensity distribution of the water waves shown in the middle panel because both distributions are derived from the square of algebraically summed wave amplitudes. The actual electron impacts are shown in Figure 3 below.

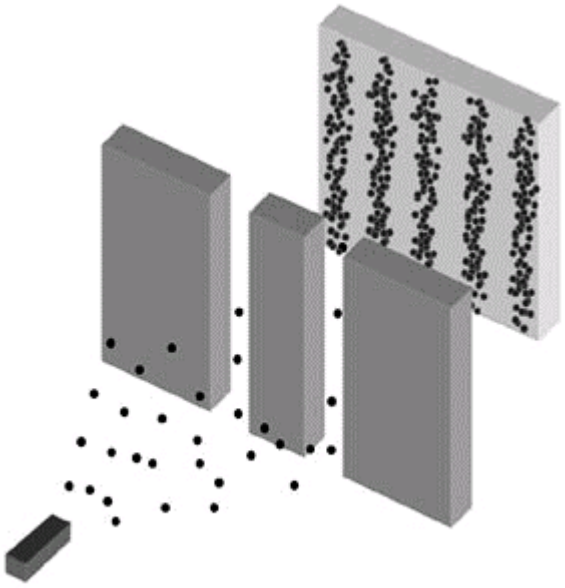


Figure 3

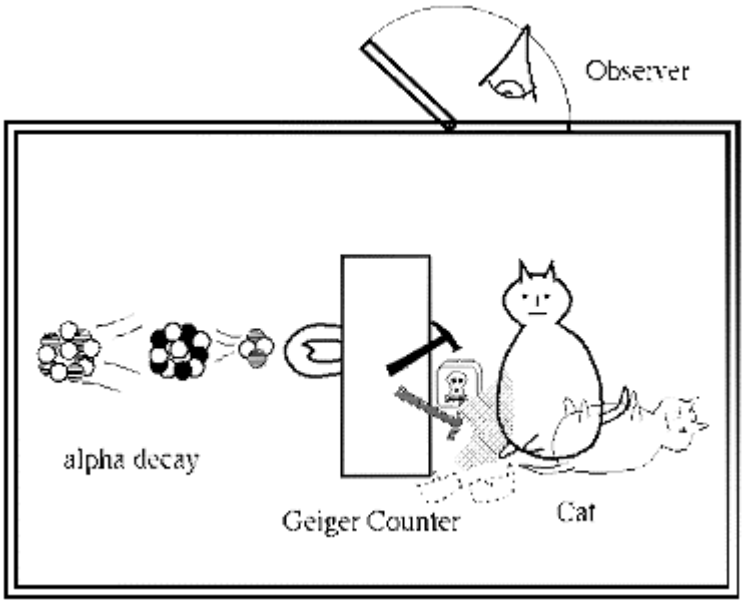
We can now state an important conclusion from this discussion. Whenever we observe interference, it suggests the existence of real, external, objective waves rather than merely fictitious waves that are only tools for calculating probabilities of outcomes. Consequently, in this chapter we shall assume that quantum waves are real waves and we therefore assume that the wavefunction is part of external, objective reality. However, in Chapter 6 and later, we shall reexamine this assumption and will suggest an interpretation without an objective reality.

Remember that when we detect quantum waves, we detect particles. Since we are detecting particles, it may seem that the particle must come from one hole or the other, but that is incorrect. The particles that we detect do not come from the holes, they appear at the time of detection. Prior to detection, we have only probability waves. A computer animation of a two-slit interference pattern (Young's experiment) that detects particles, whether photons or electrons, is given in http://www.quantum-physics.polytechnique.fr/ (topic 1.1).

What happens if we try to see whether we actually have electrons to the left of the detection screen, perhaps by shining a bright light on them between the holes and the detection screen, and looking for reflected light from these electrons? If the light is intense enough to see every electron this way before it is detected at the screen, the interference pattern is obliterated, and we see only the classical particle distribution shown in the top figure. Any measurement which actually manifests electrons to the left of the screen, such as viewing them under bright light, eliminates the probability wave which originally produced the interference pattern. After that we see only particle probability wave distributions.

4.2. Schrödinger's cat paradox

This thought experiment was originally created by Schrödinger in an attempt to show the possible absurdities if quantum theory were not confined to microscopic objects alone. (Since then, nobody has succeeded in showing that quantum theory actually is absurd.)



Imagine a closed box containing a single radioactive nucleus and a particle detector such as a Geiger counter (see drawing above). We assume this detector is designed to detect with certainty any particle that is emitted by the nucleus. The radioactive nucleus is microscopic and therefore can be described by quantum theory. Suppose the probability that the source will emit a particle in one minute is ½=50%. The period of one minute is called the half-life of the

source. (See the animation of the radioactive decay of "Balonium" at http://www.upscale.utoronto.ca/PVB/Harrison/Flash/Nuclear/Decay/NuclearDecay.html.)

Since the wavefunction of the nucleus is a solution to the Schrödinger equation and must describe all possibilities, after one minute it consists of a wave with two terms of equal amplitude, one corresponding to a nucleus with one emitted particle, and one corresponding to a nucleus with no emitted particle, both measured at the same point in space:

$$\psi = \psi_1 \text{ (particle)} + \psi_2 \text{ (no particle)}$$

where, for simplicity, we again assume the wavefunctions are real rather than complex. Now, ψ_1^2 is the probability that a measurement would show that a particle was emitted, and ψ_2^2 is the probability that it would show that no particle was emitted. (We shall see below that the interference term $2\psi_1\psi_2$ in ψ^2 does not contribute to the final observed result.)

The remaining items in the box are all macroscopic, but because they are nothing more than collections of microscopic particles (atoms and molecules) that obey quantum theory, we assume they also obey quantum theory.

[Technical note: If macroscopic objects do not obey quantum theory, we have no other theory to explain them. For example, classical physics cannot explain the following semi-macroscopic and macroscopic phenomena: 1) Interference fringes (Section 4.1) have been directly produced with buckminsterfullerenes ("buckyballs") consisting of 60 carbon atoms and 48 fluorine atoms ($C_{60}F_{48}$, http://arxiv.org/PS_cache/quant-ph/pdf/0309/0309016v1.pdf). 2) A superconducting quantum interference device (SQUID) containing millions of electrons was made to occupy Schrödinger's cat states (http://www.sciencemag.org/cgi/content/full/287/5462/2395a). 3) Ferromagnetism, superconductivity, and superfluidity all are quantum phenomena which occur in macroscopic systems. 4) The period of inflation in the early history of the universe is thought to be quantum mechanical in origin (see the excellent lectures in cosmology at http://abyss.uoregon.edu/~js/cosmo/lectures/).]

Hence, we assume the Geiger counter can also be described by a wavefunction that is a solution to the Schrödinger equation. The combined system of nucleus and detector then must be described by a wavefunction that contains two terms, one describing a nucleus and a detector that has detected a particle, and one describing a nucleus and a detector that has not detected a particle:

$$\psi = \psi_1(\text{detected particle}) + \psi_2(\text{no detected particle})$$

Both of these terms must necessarily be present, and the resulting state ψ is a superposition of these two states. Again, ψ_1^2 and ψ_2^2 are the probabilities that a measurement would show either of the two states.

Put into the box a vial of poison gas and connect it to the detector so that the gas is automatically released if the detector counts a particle. Now put into the box a live cat. We assume that the poison gas and cat can also be described by the Schrödinger equation. The

final wavefunction contains two terms, one describing a detected particle, plus released gas and a dead cat; and one describing no detected particle, no released gas, and a live cat. Both terms must be present if quantum theory can be applied to the box's contents. The wavefunction must describe both a dead cat and a live cat:

$$\psi = \psi_1(\text{detected particle, dead cat}) + \psi_2(\text{no detected particle, live cat})$$

After exactly one minute, you look into the box and see either a live cat or a dead one, but certainly not both! What is the explanation?

Schrödinger considered the possibility that until there is an observation, there is no cat, live or dead! There is only a wavefunction. The wavefunction merely tells us what possibilities will be presented to the observer when the box is opened. The observation itself manifests the reality of either a live cat or a dead cat (this is called observer created reality).

Now we must ask why the observer him/her self is not included in the system described by the Schrödinger equation, so we put it in the following equation:

$$\psi = \psi_1(\text{detected particle, observer sees dead cat}) + \psi_2(\text{no detected particle, observer sees live cat})$$

If we square this expression, as in Eq. 1, we obtain

$$\psi^2 = (\psi_1 + \psi_2)^2 = \psi_1^2 + 2\psi_1\psi_2 + \psi_2^2$$

We know that the observer observes only a live or a dead cat, not a superposition. That means that the interference term $2\psi_1\psi_2$ does not contribute to the observation. Why doesn't it? Schrödinger did not have the benefit of extensive theoretical research done in the last few decades. This has shown that, because in practice it is impossible to isolate any macroscopic object from its environment, we must include its effects in this equation. Environmental effects include all of the interactions between the rest of the universe and everything in the experiment including the detector, the poison gas bottle, the cat, the box, and the observer. When such effects are included and averaged over, the interference term gets averaged out, leaving only

$$\psi^2 = (\psi_1 + \psi_2)^2 = \psi_1^2 + \psi_2^2 \qquad \text{(Eq. 2)}$$

Without the interference term, Eq. 2 no longer describes the superposition of a dead cat and a live cat. Superficially, it is similar to the description of classical objects like bullets as was discussed above Fig. 2. In the classical case, before an observation the cat is real but either alive or dead. The probabilities represent only our ignorance of the actual case. However, in the quantum case, before an observation there is no cat, live or dead. There is only a wavefunction that represents the possibilities that will be manifested when an observation is made.

4.3. Bell's theorem, the Aspect-Gröblacher experiments, and the nonlocality of reality

One of the principles considered most sacred by Einstein and indeed by most physicists up

until the 1980s is the principle of local causality, or locality for short. This principle (which comes from Einstein's theory of special relativity) states that no physical effect can be transmitted with a velocity faster than light. Also implied, but not always stated, is the principle that all physical effects must decrease as the distance between the source of the effect and the object affected increases. In practice, this principle prohibits not only all instantaneous action-at-a-distance, but also any action-at-a-distance when the distances are so large that the longest-range known force that can transmit signals, the electromagnetic force, cannot feasibly produce the effect. If the particles of a system are assumed to be independent of each other except for physical effects that travel no faster than the velocity of light, the system is said to be local. This means, e.g., that if a measurement is made on one particle, the other particles cannot be affected before a local signal from the first particle can reach them.

In addition to locality, the other strongly held principle was the principle of objective reality (see Section 1.1). This principle states that there is a reality that exists whether or not it is observed. Prior to the discovery of quantum mechanics, this meant that this reality consisted of material particles or waves that always had definite physical properties, and which could become known either by making a measurement or by calculation using classical laws and a known initial state. For example, a particle always had a definite position and velocity prior to measurement, even though they may not have been known until a measurement or calculation was made. We call this strong objectivity. After the development of quantum mechanics, those who believe in an observer-created reality believe that only a wavefunction exists prior to an observation but this is still considered to be objectively real. However, its physical parameters, such as position and velocity, are indefinite until a measurement is made. This is called weak objectivity.

Weak objectivity was difficult enough to accept by some physicists, but quantum theory predicted something else that was even harder to accept--that reality is nonlocal. This means that a measurement on one particle in a nonlocal system is correlated with a measurement on any of the other particles in the system even if no local signal passes from the first measurement to the second. For example, a measurement of the position of one particle in a nonlocal system is correlated with a position measurement on any of the other particles, independent of any local signals. A nonlocal system of particles is described by a wavefunction formed by a superposition of individual particle wavefunctions in such a way that all of the individual waves are locked together into a coherent whole. In such a coherent superposition, it is no longer possible to identify the individual particle components. The system behaves as a whole rather than as a collection of independent particles. We shall describe an example of a nonlocal system when we discuss Bell's theorem below.

Einstein could never accept a reality which was nonlocal or which was indefinite. His paper written with Podolsky and Rosen in 1935 [the famous EPR paper, *Can A Quantum-Mechanical Description of Physical Reality be Considered Complete?*, A. Einstein, B. Podolsky, N. Rosen, Phys. Rev. 47 (1935) 777-780] was an attempt to use a thought experiment to show that, because quantum mechanics could not describe a reality which was both local and definite, the theory was incomplete. [Biographical note: This was Einstein's last major paper on quantum theory. Until he died in 1955, he tried to devise a "unified field theory" which would unite general relativity with electromagnetism in one theory. He failed in this because he could not accept the quantum description of electromagnetism. Actually, his failure is no greater than that of present-day physicists, who have produced many candidates for a unified field theory but none that can be verified with current experimental techniques.]

Following the EPR paper, many physicists expended a great deal of effort in trying to devise theories that were complete, namely theories that assumed that parameters like position and velocity are at all times definite even if they are unknown, and which at the same time gave results that agree with quantum theory. (These are called hidden variable theories, which by definition assume strong objectivity.) None of these theories found general acceptance because they were inelegant, complicated, and awkward to use, and the best-known version also turned out to be extremely nonlocal (David Bohm, see Section 6.2).

In 1964, John Bell (1928 – 1990, brilliant, creative Northern Ireland physicist) devised a way to determine experimentally whether reality could be described by local hidden variable theories, and derived an inequality that was valid only if local hidden variable theories were valid [*On the Einstein Podolsky Rosen Paradox*, J.S. Bell, Physics 1 (1964) 195-199]. Furthermore, this inequality depended only on experimentally measured quantities, hence it was independent of any specific theory. Any violation of the inequality would prove that reality cannot be both strongly objective and local.

Many experiments were subsequently done to test his inequality, with the results that it was always violated, thus showing that if there is a strongly objective reality, it could not be local. In addition, the experiments always gave results that were consistent with the predictions of quantum theory. The best of these experiments were done by a group led by French physicist Alain Aspect in 1981-82 [*Experimental realization of Einstein-Podolsky-Rosen-Bohm Gedankenexperiment: A New violation of Bell's inequalities*, Alain Aspect, Phillipe Grangier, Gérard Roger, Phys. Rev. Lett. 49 (1982) 91-94]. These results have far-reaching implications in the interpretation of quantum theory, as we shall see below.

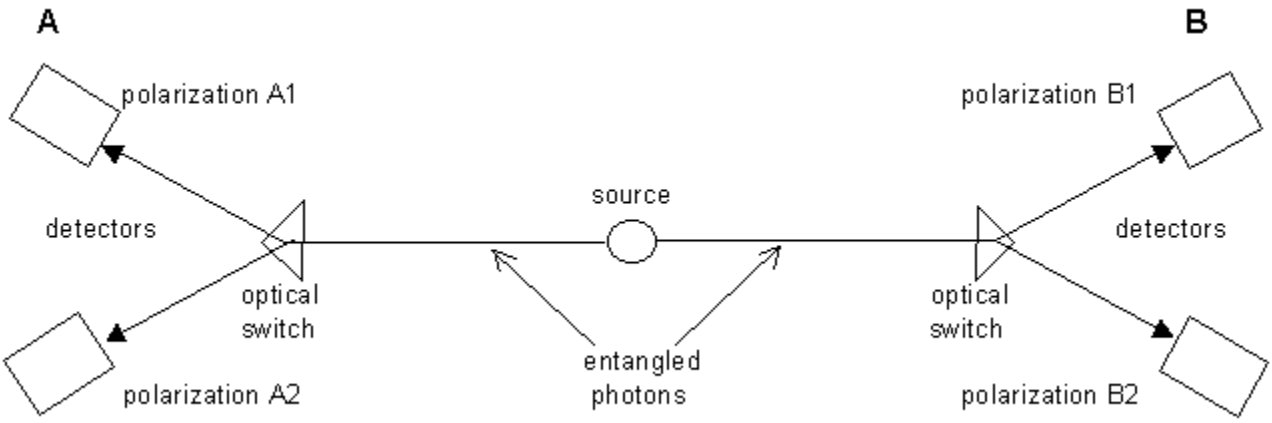
Note: The following discussion is somewhat technical. The reader may wish to skip directly to the bolded conclusions in this section.

The Aspect experiments used pairs of photons, the two photons of each pair being emitted in opposite directions from a calcium source. These photon pairs had the property that the polarization directions (the vibration directions, which are always perpendicular to the propagation direction) of the two photons of a pair were always parallel to each other, but the polarization directions of different pairs were randomly distributed.

The two sides of the experiment were 12 meters apart (see the diagram below). Each side had two detectors, to detect photons with two different polarization directions. Each detector separately recorded an equal number of photons for all polarization directions, showing that the photons were completely unpolarized. The detectors were wired to measure only coincidence counts, i.e., photons were recorded only if they were detected approximately simultaneously at A and B. Bell's inequality says that, if reality is local, a certain function S of these coincidence counts, measured for all four combinations of the two polarization angles A1, A2 and the two polarization angles B1, B2, must be between -2.0 and +2.0. The experiments yielded a value for S_{expt} of 2.70 ± 0.015. Thus Bell's inequality was violated.

Conclusion: The system in the first Aspect experiments was either indefinite or nonlocal but could not have been both definite and local. This result was independent of whether or not quantum theory was valid.

These experiments could not distinguish between a reality that is not strongly objective but is local; one that is nonlocal but is strongly objective; and one that is neither strongly objective nor local. Furthermore, the measured value of the function S was always in agreement with the predictions of quantum theory ($S_{QM} = 2.70 \pm 0.05$), which assumes that the photons are described by wavefunctions.



Bell's function F is a measure of the correlations between the polarizations (vibration directions) measured at the two sides A and B. The existence of correlations does not itself prove that reality is indefinite or nonlocal. In fact, correlations can exist between measurements at the two sides whether the photons are local and definite ("real" photons) or whether they are nonlocal and indefinite. If they are local and definite, correlations will exist if the two "real" photons emitted by the source are individual particles that are polarized parallel (or perpendicular) to each other. If they are nonlocal and indefinite, correlations can exist if the system is described by a wavefunction that is a coherent superposition of the waves of the two photons (an "entangled pair"). Because such a wavefunction represents a coherent whole rather than individual particles, it permits correlations that are greater than can exist with local, definite photons. That is why S is greater for entangled photons than for local, definite photons, and why the measured violation of Bell's inequality is consistent with photons described by quantum theory.

Next, the Aspect group showed that the violation of Bell's inequality measured in the first experiments could not have been due to some unknown type of local signal carrying polarization information from one set of detectors to the other, rather than being due to the properties of the wavefunctions alone. By definition, such a local signal would have had to propagate with a velocity no greater than that of light. Thus, the next set of experiments was designed to prevent any possible local signal transmission between the two sides from affecting the results [*Experimental test of Bell's inequalities using time-varying analyzers*, Alain Aspect, Jean Dalibard, and Gérard Roger, Phys. Rev. Lett. 49 (1982), 1804 - 1807]. To do this, the decision about which polarization direction to measure at side A was made after a possible local signal from a measurement at side B was already in transit, and similarly for the converse. Therefore, a polarization measurement at B could not affect a polarization measurement at A, and vice versa. **The conclusion from the second set of experiments was that the correlations could not have been a result of local signal transmission. This implied that their system was nonlocal.**

Now we must ask whether any class of hidden variable theories, which are all designed to be strongly objective, can be excluded by experiment. (Bell's theorem and the Aspect experiments say only that hidden variable theories must be nonlocal. It does not exclude any class of nonlocal hidden variables theory.) To help answer this question, an inequality similar to Bell's inequality was recently devised by Tony Leggett [*Nonlocal hidden-variable theories and quantum mechanics: An incompatibility theorem,* Foundations of Physics, 33 (2003) 1469–1493]. An experiment was then done by S. Gröblacher *et al*. to see whether a broad class of hidden variable theories (that are all nonlocal) could be excluded [*An experimental test of non-local realism,* Nature 446 (2007) 871-875].

Gröblacher *et al*. concluded that no hidden variable theory that is not counterintuitive (that is not bizarre) can describe reality. If so, then reality cannot have definite properties before measurement. The Aspect and Gröblacher experiments taken together strongly imply that reality is both indefinite and nonlocal (there are no "real" particles). This conclusion is independent of whether or not quantum theory is valid.

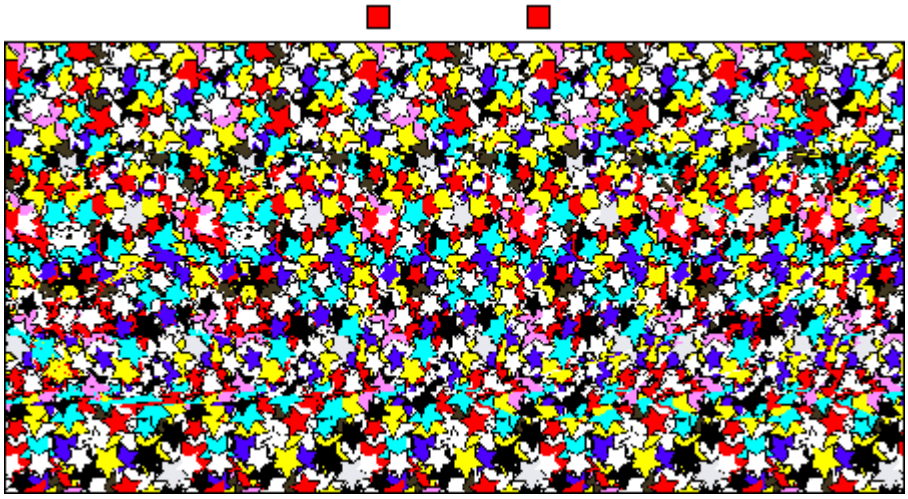
The experiments of Aspect and Gröblacher *et al*. do not prove quantum theory to be valid but are consistent with its predictions. [No number of experiments can prove that any physical theory is valid. However, it takes only one well-done experiment, if it is confirmed independently by independent researchers, to prove that a physical theory is invalid.] We have seen in Section 3.2 that, if quantum theory is valid, it does not tell us what is there before a measurement. This is the indefiniteness property. In Chapter 6 we shall also see that quantum theory is nonlocal.

In a nonlocal system, a measurement made at one end of the system is correlated with a measurement made at the other end even if no local signal passes between the two. It might be thought that, because nonlocal correlations can exist between events occurring at two different points, observers at these two points could use these correlations to communicate instantaneously with each other in violation of Einstein's special theory of relativity. However, the nonlocality of quantum theory implies a correlation between data sets, not a transmission of information at greater than light velocities. Thus, the special theory is not violated. We can see this by realizing that the photons detected at either A or B alone occur completely randomly both in time and in polarization. Consequently, observer A sees no information in his data alone, and likewise with observer B. It is only by later comparing these two random sets of data that a correlation between the two sets can be discovered.

[Technical note: Theoretical calculations indicate that the human eye might be sensitive enough to detect the correlations from entangled pairs of photons without the aid of electronic devices, *Possible entanglement detection with the naked eye*, Brunner, Branciard, Gisin, Phys. Rev. A 78 (2008) 052110.]

There can be strong correlations between two random sets that cannot be discovered by looking at one set alone. This is illustrated by the example of random stereograms (Magic Eye diagrams, see www.magiceye.com and below) which, when first viewed, look like near-random patterns of colored dots (see below). However, there are actually two separate near-random patterns present, and they are displaced from each other by a distance roughly equal to the spacing between a person's eyes. Thus, by looking at the pattern with the direction of the eyes nonconvergent as if looking some distance away, the two eyes see different patterns. The

correlations between the patterns are discerned by the brain, and a three-dimensional image is seen.



Magic Eye images may be easier to see if viewed on paper rather than a computer screen. If possible, print this image and follow the instructions below. (You don't need to print in color.)

Hold the center of the printed image *right up to your nose.* It should be blurry. Focus as though you are looking *through* the image into the distance. *Very slowly* move the image away from your face until the *two squares* above the image turn into *three squares*. If you see four squares, move the image farther away from your face until you see three squares. If you see one or two squares, start over!

When you clearly see three squares, hold the page still, and the hidden image will magically appear. Once you perceive the hidden image and depth, you can look around the entire 3D image. The longer you look, the clearer the illusion becomes. The farther away you hold the page, the deeper it becomes. Good Luck!

4.4. Another experimental violation of observer independent theory

Section 4.3 discussed conflicts between the hidden variables and quantum descriptions of experiments that were done on entangled quantum objects, such as pairs of entangled photons. Recently, measurements were done on pairs of trapped ions that were not entangled, and even with these non-entangled particles, the results were consistent with quantum theory but inconsistent with the assumption of observer-independent particles (*State-independent experimental test of quantum contextuality*, Kirchmair, Zähringer, Gerritsma, Kleinmann, Gühne Cabello, Blatt, Roos, Nature 460 (2009), 494-497).

Chapter 5. Conscious mind and free will

(Note: This chapter is based on the assumption that the brain is objectively real. In Chapter 9 and following, we shall see that this assumption is unnecessary and, in fact, like any

assumption of an objective reality (Section 1.1), it cannot be verified. Furthermore, it leads to the additional assumption that there is an objective "I" that suffers.)

5.1. What are the characteristics of conscious mind?

Mind is the conscious experience of the functioning of the brain and senses. This is to be distinguished from the functioning itself. Mind has three important aspects:

a) The contents of mind: Mental contents include thoughts, emotions, feelings, dreams, and visions. Perceptual contents include those that are internal to the body as well as those that are external. Perceptual contents that are internal include sensations of pain, pressure, stretching, tension, movement, proprioception, and interoception. Many of these involve emotional components as well, such as fear or pleasure. Analogs of these mental and perceptual contents are the shadows on the wall in Plato's cave allegory (see Section 1.4), or the images on the screen in a movie theater.

b) A special case of the contents of mind is the field of mind. The field of mind varies from wide to narrow depending on the degree of focus, and can be directed towards any object. An analog is the field of view of an optical system such as a telescope or camera.

c) Another special case that is normally assumed to be among the contents of the mind is the subject of mind. (We shall see in Chapters 9 and 11 that there really is no subject in the mind.) In both Plato's allegory and the movie theater metaphor, the subjects are the observers in the audience.

There are several ordinary states of conscious experience, the most common being waking, dreamless sleep, and dreaming. There are also altered states of consciousness that can be experienced in meditation or under the influence of mind-altering drugs. Other states are those that are experienced under hypnotic trance, sedation, or anesthesia. All of the contents of our minds are essentially private since our thoughts, feelings, emotions, and sensations, are entirely our own. For example, any sensation, such as "red," is an experience that we know intimately, but it is impossible to convey that experience to anybody else. We assume that each person has had a similar experience, but we can never know this to be true. Conscious experience may include the state in which there are no objects except the subject and/or the field, and even the state in which there are no objects at all. Such states are achievable in deep meditation.

Question: If all of our experiences are essentially private, what does that imply about the existence of an external, objective reality?

5.2. Extraordinary abilities of the mind

There is a great deal of evidence--some reliable, some not so reliable--that the mind is much more than merely the central processor for sensory information. We know that sensory processes are all local, i.e., they depend on local transmission of information. However, extrasensory processes may be nonlocal, i.e., they may depend on nonlocal correlations

between two minds or between a mind and an event that is remote, either spatially or temporally (see Section 4.3). Nevertheless, whether the extrasensory processes are local or nonlocal, we shall refer to all of them as nonlocal mind. Much more will be said about this in Chapters 9, 12, and 16.
Russell Targ and Jane Katra in their 1998 book, *Miracles of Mind*, list a few of the extrasensory abilities that have been demonstrated:

> Telepathy: Direct mental communication between one mind and another.
>
> Remote viewing: Obtaining a mental image of a remote target object at which an accomplice is located. This is different from telepathy because the image often contains details not noticed by the accomplice.
>
> Clairvoyance: Obtaining a mental image of a remote target without the aid of an accomplice.
>
> Precognition: There are several types of precognition. A prophecy is a dream or vision of a future event when there is no possibility of taking any action that could change the future. Examples are recording a prophecy and revealing it only after the event has occurred, or prophesying in a vague, nonspecific way. Two famous prophesiers were Nostradamus (http://en.wikipedia.org/wiki/Nostradamus/) and Edgar Cayce (http://en.wikipedia.org/wiki/Edgar_Cayce/). If the precognition is specific enough to allow an action to be taken to avert a future event, then it is called a forecast, premonition, or presentiment (pre-sentiment). Example: a dream of an airplane crash that allows a person to avoid that flight.
>
> Distant hypnosis: Inducing hypnosis of a person at a distance.
>
> Psychic healing: A type of remote viewing and healing in which the healer actively transposes intuitive impressions into thoughts and specific healing actions in a patient's body to remedy a perceived problem.
>
> Spiritual healing: Remote healing in which the healer is in a receptive, aware, nonjudgmental state which allows his or her consciousness to be used as a conduit for healing by nonlocal, universal mind.
>
> Energy healing: Healing in which the healer directs his or her attention to the patient and concentrates on replenishing or manipulating the patient's vital energy flow. Examples are reike, therapeutic touch, laying on of hands, pranic healing, and Qi Gong.
>
> Intuition: Direct, nonanalytical awareness that can come from nonlocal mind, internal subconscious processes, psychic sources such as mind-to-mind connections, or direct clairvoyant perception of the outside world.

The existence of extraordinary abilities attained through the practice of yoga is well established and documented in the literature of yoga, where they are called siddhis. The fourth century BC

sage Patanjali enumerated the following siddhis in his *Yoga Sutras* (as listed by Targ and Katra):

> Knowledge of past and future; understanding of the sounds made by all creatures; knowledge of past lives; knowing what others are thinking; prior knowledge of one's death; the attainment of various kinds of strength; perception of the small, the concealed, and the distant; knowledge of other inhabited regions; knowing about the stars and their motions; knowledge of the interior of the body; control of hunger and thirst; steadiness; seeing the adepts in one's own interior light; intuition; understanding of the mind; entering the bodies of others; lightness and levitation; brightness; control of material elements; control of the senses; perfection of the body; quickness of the body.

The effects of nonlocal mind are clearly experienced when people are meditating in a group. (Because of the interactions between the minds of pairs of meditators, the effects of nonlocal mind presumably increase with the square of the number of meditators.) The Transcendental Meditation (TM) organization has conducted several demonstration projects to show the effects on the surrounding community of a large number of people meditating in a group. [For example, see Social Indicators Research 47, 153-201, June 1999; also at http://www.springerlink.com/content/k2hg216724k21411. This project occurred in Washington, D.C. between June 7 and July 30, 1993 and involved up to 4000 people meditating in a group. An independent group of scientists approved the research protocol and analyzed statistically the results. The report showed that homicides, rapes, and assaults decreased by 23% (significance $p<2x10^{-9}$) in D.C. during the period and reverted to norms afterwards.]

Question: In your own experience, is there a difference between meditating alone and meditating in a group?

In a remarkable series of experiments consisting of several million trials, Robert G. Jahn and Brenda J. Dunne of Princeton University have shown that operator intention alone can produce small but statistically significant ($p<7x10^{-5}$) effects on the functioning of various physical devices operating randomly (http://www.princeton.edu/~pear).

Bill Tiller and colleagues of Stanford University (http://tillerfoundation.com/index.php) have discovered that it is possible to make a significant change in the properties of a material substance by consciously holding a clear intention to do so. For example, they have been able to change the acid/alkaline balance (pH) in a vessel of water either up or down, without adding chemicals to the water, merely by creating an intention to do so. In addition, they have been able to use a simple electronic device to "store" a specific intention within its electric circuit. This "intention programmed" device can be placed next to a vessel of water at any physical location to obtain the same results they have achieved in their lab. In this way, others have replicated these water pH results at multiple locations around the world.
[Note: We shall see later that it is not surprising that the mind can directly affect matter. In Chapter 6, we shall see that, in one version of the Copenhagen interpretation of quantum theory, matter is manifested by consicousness. In Chapter 9, we shall see that all material objects are really mental objects. Mind can affect matter because there is no difference between mind and matter.]

More evidence of nonlocal mind appears in the data of The Global Consciousness Project (see http://noosphere.princeton.edu/), which has maintained many random event generators (REG) scattered throughout the world since 1998. These REGs submit their data automatically to a server in Princeton, NJ for archiving. The archived data can then be searched for evidence of nonrandom correlations between the REGs. Such correlations have been found when a large fraction of the world's population is focused on some extraordinary event. For example, strong correlations between the REGs were found on September 11, 2001 beginning a few minutes after the last attack and continuing for several hours afterwards. The odds that these correlations exceeded chance were about 35 to 1.

For our purposes, the main conclusion that we wish to glean from these abilities is that the mind functions not only through the senses, but also through extrasensory processes. This means that large regions of space, possibly all space; and large eras of time, possibly all time, past and future; may be open to it.

In addition to the possibility of healing remotely, the mind demonstrably can heal locally. Proof is given by the widespread experience of the placebo effect. Research has confirmed that a fake treatment, made from an inactive substance like sugar, distilled water, or saline solution, can have a placebo effect--that is, the sham medication can sometimes improve a patient's condition simply because the person has the expectation that it will be helpful. For a given medical condition, it is not unusual for one-third of patients to feel better in response to treatment with placebo (*FDA Consumer magazine,* January-February 2000). The placebo effect has even been demonstrated in sham knee surgeries (*New England Journal of Medicine*, July 11, 2002), and in sham brain surgeries on Parkinson's disease patients (*Nature Neuroscience*, May 2004).

There are mixed data on the power of prayer in physical healing. A recent well-designed study was designed to determine the effects of intercessory prayer on coronary bypass patients (*American Heart Journal* 151,934-42, April 2006). It found that there was no beneficial effect of intercessory prayer on the healing of the patients, and, in fact, if the patients knew they were the subjects of such prayers, they suffered from more complications than did those who did not know. However, several millenia of experience attest that praying for others is of spiritual benefit to those who are praying if not of physical benefit for the persons prayed for. One can very easily demonstrate this for oneself. One important form of prayer for others is the loving-kindness meditation of Buddhism (see Section 24.2).

Question: Have you ever prayed for anybody else's healing? Did you experience a healing in your own mind?

5.3. The unity of the human mind

From this discussion, we still cannot answer the question, what is conscious mind? Can we explain it in terms of simple constituents, i.e., can we apply reductivist scientific methods to it, or is it fundamentally a unity? If it is a fundamental unity, does it have a location and size? In answering these questions, we must be careful not to identify the mind with the brain. The mind is subjective while the brain is objective. Therefore, in studying the mind, we must study it subjectively, not objectively. This means to examine our direct experience of the mind and to disregard our preconceived concepts about it.

In some respects, our mind appears to be a unique, unified, continuous thing that provides continuity to our lives and unity to our perception. We seem to be one person, not multiple persons. Even a person with multiple personality disorder thinks of him or her self as one self but with more than one subself..

However, when we examine the mind in a little more detail, it becomes more complex. For example, what do we mean when we speak about inner conflict? Are there two minds in conflict? What about the common advice, “Love and accept yourself”, and what about our attempts to control our minds or ourselves? How many selves are there? We shall consider these questions and similar ones later in this course.

5.4. Unconscious functioning of the brain

We call the state of the absence of the mind’s contents an unconscious state. We must distinguish between unconscious, mechanical functioning of the brain, and unconscious, but not purely mechanical, functioning.

Much of the unconscious functioning of the brain is completely physical or mechanical, with no mental component. Such processes could be replaced by those of a machine with no discernible difference. This is probably true for those unconscious processes dealing with the physical functioning of the body. Most of the internal organ functions are performed without our awareness, and those that are controlled by the brain are controlled by purely physical components of the brain without any awareness.

However, there are other unconscious processes that might not be completely mechanical. Everybody has had the experience of a creative solution to a problem arising spontaneously after a period of unconscious ferment such as after a night’s sleep, or after (or during) a meditation. This process of creativity has three stages: saturation (gathering and absorption of all pertinent information), incubation (letting this information “cook” in the mind), and illumination or manifestation (the genesis of the new concept). The latter two stages are largely unconscious. It seems unlikely that they could be purely mechanical and still give birth to something entirely new. Of course, it would be difficult to prove that such concepts are in fact totally new, rather than some rearrangement of previously learned concepts.

Question: Have you ever "slept on" a problem overnight only to wake up the next morning with the solution in your mind?

5.5. Is there a test for consciousness?

What objects are conscious? This question was also asked in Sections 1.2 and 1.3. Because other human beings behave like we do, we assume that they are conscious. But is such behavior proof of consciousness? Some animals exhibit human-like behavior. Are they conscious? If so, are fish and plants also conscious? What about amoebas? Does consciousness come in degrees, so that everything is conscious to some degree? The problem with answering the question, “What is conscious?”, is in devising a test that tells us whether something is or is not conscious. Such a test does not exist in science because it would have to measure directly an object’s consciousness rather than its behavior.

To reveal the difficulties in this type of measurement, suppose that my mind is directly sensitive to your mind without my depending on any cues from your behavior or your physical reactions. We might think that such might be the case in certain kinds of telepathic events. Now, for example, could we determine whether my experience of “red” is the same as yours?

The answer is no because my experience of red is still inescapably in my mind, never in yours. Thus, a telepathic technique does not give us a way to determine whether my experience of red is the same as yours. Furthermore, no matter what the technique for measuring consciousness, there is always the problem that the person interpreting the measurement is aware of only the contents of his or her own mind, never of anybody else's.

This does not mean that minds cannot communicate with each other. Nonlocal consciousness allows this (see Sections 5.2, 9.4, 12.1, 12.2, Chapter 16).

Question: What kind of world would this be if we could not communicate with each other? Would there even be any world but mine? Would there even be a world?

The question of which objects are conscious assumes that an object can be conscious. This might be a mistaken assumption. Perhaps no object is conscious and what we think of as a conscious object, like for example a human, is not conscious at all. Perhaps, consciousness is not even a property of objects. This would mean that no object itself can be aware but it could also mean that Consciousness is what aware of objects. We shall investigate this possibility in Chapter 9.

5.6. Can a machine be conscious?

[As mentioned above, there are no objective tests for consciousness. In Chapter 9, we shall see that consciousness is purely subjective. The concept that there could be an objective test for consciousness is what is called a category mistake. Consciousness is in a category by itself, while objects are in a separate category.]

In 1950, English mathematician Alan Turing (1912 - 1954) proposed a test to determine whether a computer can think. He posed the question, “Suppose a human, after extensive conversations with the computer, cannot distinguish between the responses of the computer and those of a human, then might the computer be intelligent?” Because we know that some deterministic systems behave chaotically and unpredictably, even a deterministic computer could be as unpredictable as a human.

We might think that a very complex computer might be capable of understanding, and if understanding is part of consciousness, then a computer might be conscious. However, we can prove that a computer, no matter how complex and no matter how much its behavior mimics human behavior, need not be capable of understanding. This is shown by the famous test invented in 1980 by English-American philosopher John Searle (1932 -). Its purpose was to show that a human being can perform any function that a computer can (although much slower) without having any understanding of the meaning of the function. Hence, if the human need not understand, the computer need not either. A computer takes a set of input statements, operates on them by means of a predetermined algorithmic procedure, and produces a set of output statements. Although it does this electronically, the same procedure

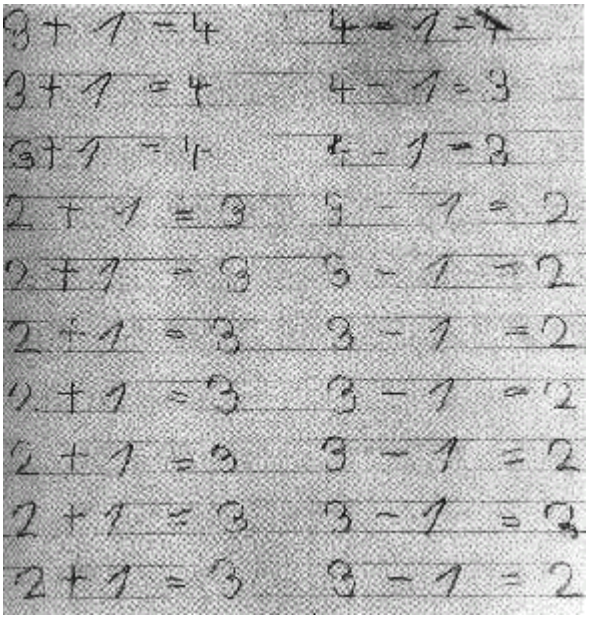
could be done by means of mechanical operations on mechanical components. A human could take the same input statements (in a readable, but not understandable, form) and by merely following instructions (the algorithm) perform all of the mechanical operations without any understanding of the meaning of the input-output statements or the algorithm. (For example, a human can solve a jig-saw puzzle by fitting the pieces together, but might not be unable to understand the resulting picture.) Thus the computer need not understand either.

If consciousness were really a function of complexity, then an extremely complex computer might be conscious. But what would be the function of consciousness in a computer that operates algorithmically, i.e., by following a prescribed procedure?

In 1930, Austrian-American mathematician Kurt Gödel (1906 - 1978) showed that, in any finitely describable, logical system (one that can be described by a finite number of statements), that is self-consistent and that contains the rules of arithmetic, there are true statements that are not theorems of the logical system. His proof shows that these true statements can be seen to be true even though they are not theorems.

> Before we discuss this theorem, we first define what we mean by a logical system. Consider the statements
>
> $$a>b \text{ and } b>c$$
>
> where a, b, and c are integers. We assume that both statements are true, i.e., that they are the axioms. Then we must conclude that
>
> $$a>c$$
>
> This is a theorem that must be true if the axioms are true. This is an example of the simplest possible axiomatic logical system. It consists of a set of axioms, which are accepted but are not proved, and the set of all of the theorems that follow from the axioms.

Gödel's theorem shows that no logical system can produce all of the true statements that are possible. In other words, there are some true statements that cannot be proved within <u>any</u> logical system. A conclusion one might draw from this theorem is that consciousness can learn truths that a computer following the rules of logic can never discover. This might mean that a deterministic computer can never model consciousness, or no deterministic computer can be conscious no matter how complex it is. Furthermore, it might mean that no scientific theory (which is a logical system) can explain everything, possibly including consciousness. That would mean that it might never be possible to conceive a true Theory of Everything. (A Theory of Everything is the holy grail of physics. It is a theory that would determine all physical laws and physical constants without inputting any numerical values.)



Gödel's school work, age 6-7 (J. W. Dawson, Jr., *Logical Dilemmas* (1997))

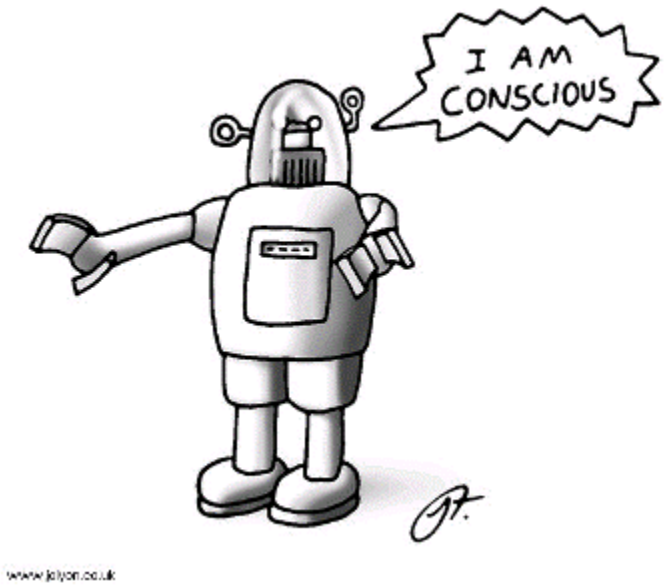
In 1982, the American theoretical physicist Richard Feynman (1918 - 1988) showed that a classical computer (that is, a deterministic one) can never simulate nonlocality [R.P. Feynman, *Simulating physics with computers*, International Journal of Theoretical Physics, 21, (1982) 467-488]. Thus, if nonlocal mind really exists, a classical computer could never simulate a human mind.

Humans exhibit creativity, which is a discontinuous pattern of thought. It is difficult to see how a deterministic computer, even if chaotic, could operate discontinuously.

Exercise: Give examples in your experience that your mind sometimes works discontinuously, i.e., that some thoughts occur that are not related to previous thoughts.

Humans seem to have a sense of inner connection with other humans that could not exist between human and machine, no matter how complex. This connection, which may be a manifestation of nonlocal mind, may be impossible to simulate in any kind of machine.

Question: Have you ever experienced a sense of inner connection with a machine?



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5.7. What seem to be the effects of consciousness?

Forget for the moment that, without consciousness there may be no physical world (Section 4.2). Does consciousness affect the physical world? It does indeed seem to have an effect on the physical world, although one must be cautious about this:

a) We are unaware of much of what the body does so consciousness seems to play no role in such functions.

b) Much of what we do consciously would not be different if we were not conscious (see Section 5.9 also). Does the fact that our perceptions and understanding are conscious actually make a difference? Would not cleverness without consciousness be as good as with consciousness?

c) If animals are unconscious, then those aspects of human behavior that are like animal behavior are apparently unaffected by consciousness.

However, there are ways in which the physical world seems to be directly affected by consciousness, e.g., books are written about it, we talk about it, courses are given about it, consciousness of suffering stimulates many people to understand suffering in order to end it, and gaining this understanding requires our becoming even more conscious.

Questions: Suppose there is no physical world and there is only a subjective world, i.e., the only world that exists is in the mind. Answer the following questions:
a) Would it be possible to be unaware of some functions of the body?
b) Could we do anything unconsciously?
c) Could anything be unconscious?

5.8. When and how does a child begin to perceive objects?

Is the perception of separate objects an ability that the child learns from its parents, or is it an innate function of the developing physical brain? There has been much research on the development in the infant of the ability to perceive separate objects and to conceive of them as existing independently of the infant's perception of them.

In his book *Visual Intelligence* (1998, pp. 12-16), Donald D. Hoffman describes the development in the child's mind of the ability to make conceptual sense out of the confusion of retinal images presented to it:

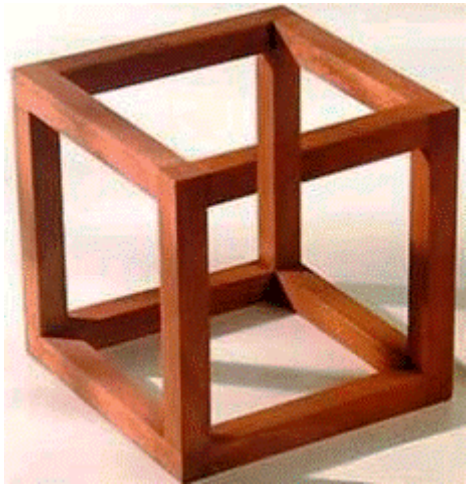
> "Among the most amazing facts about vision is that kids are accomplished geniuses at vision before they can walk. Before age one, they can construct a visual world in three dimensions, navigate through it quite purposefully on all fours, organize it into objects, and grasp, bite, and recognize those objects . . . By about the age of one month, kids blink if something moves toward their eyes on a collision course. By three months they use visual motion to construct boundaries of objects. By four months they use motion and stereovision to construct the 3D shapes of objects. By seven months they also use shading, perspective, interposition (in which one object partially occludes another), and prior familiarity with objects to construct depth and shape. By one year they are visual geniuses, and proceed to learn names for the objects, actions, and relations they construct . . .
>
> . . . each child constructs a visual world with three spatial dimensions—height, width, and depth. But an image has just two dimensions—height and width. It follows that, for a given image, there are countless 3D worlds that a child could construct . . .
>
> . . . This ambiguity holds not just for depth, but for all aspects of our visual constructions, including motion, surface colors, and illumination. . .
>
> . . . This makes the task sound impossible. How could a child sort through countless possible visual worlds and arrive at much the same answer as every other child?"

Hoffman concludes that all children are born with the same rules by which they construct their visual worlds, and which allow each of them to see much the same world as any other child. Thus, the principal prerequisite for perceiving objects turns out to be an inherited predisposition to do so. Hoffman argues that the universal rules of vision parallel the universal rules of language (see Noam Chomsky, *Reflections on Language*, 1975) by which a child's ability to learn a language is also part of its heredity.

An important special example of the infant seeing separate objects is its perception of its mother as an object beginning at about 4 months (see, e.g*., Child Development and Early Education*, by Pauline H. Turner, 1994, pp. 58-59). After about 8 months, the child begins to perceive itself as an object separate from its mother, this process becoming complete at about

15 months. It seems likely that these developments must also be a result of the child's inherited abilities.

We conclude from these studies that our ability to perceive separate objects and individuals is a product of our innate tendencies. Yet, as we shall soon see, the perception of ourselves as separate, autonomous entities is the basis of all of our suffering. Thus, it seems that we are all born with a tendency to suffer. Fortunately, this depressing thought is not the whole truth. We are told by the sages that our perceptions are mistaken and that this mistake can be corrected. But before it can be corrected, it must be understood. Gaining this understanding is the objective of much of the remainder of this course.

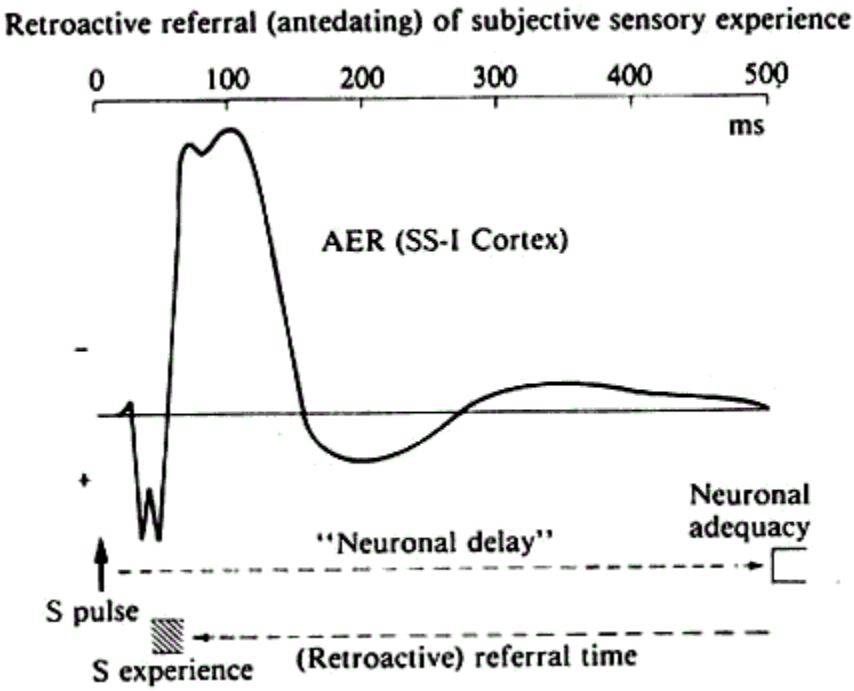


A 6-7 month old infant can see that this object is impossible (http://www.education.umn.edu/ICD/YonasLab/past_studies.html).

Question: Does the experiment of the above figure necessarily imply that the infant sees the object as existing outside of the mind?

5.9. The experiments of Libet, et al., and their implications for free will

In a ground-breaking series of experiments first reported in 1973, Benjamin Libet (noted American physiology researcher, 1916-2007) showed that the earliest experiential awareness of a sensory stimulus occurs about 500 msec (0.5 sec) after the stimulus itself (see diagram below) [*Subjective referral of the timing for a conscious sensory experience: a functional role for the somatosensory specific projection system in man*, by Libet, Wright, Jr., Feinstein, and Pearl, Brain 102 (1979) 193-224]. These experiments involved applying small electrical pulses to the skin of the hands of patients who were undergoing brain surgery, and then measuring the resulting electrical signals from electrodes implanted in the sensory cortex. The initial negative pulse is the primary evoked potential resulting from the nerve impulse traveling from the hand to the brain---it appears 10-30 msec after the skin stimulus. The subsequent wave (average evoked response AER) is the brain's response to the stimulus.



The experiments showed that none of our experiences of perception are in objective time but in fact are delayed by about one-half second after the objective events. (Objective time is time as observed on a clock or other measuring instrument.) This delay is the time required for the AER to rise to the level necessary for experiential awareness (neuronal adequacy). (Other experiments showed the necessity of neuronal adequacy for subjective experience to occur.) This means that it is impossible to respond volitionally in less than 500 msec to any external stimulus since our experience is always delayed by that much. [Libet. et al. also showed that meaningful but unconscious, reflexive behavioral responses can occur in as little as 100 msec after a stimulus, showing that meaningful behavior need not be conscious behavior (e.g., a sprinter exploding from the blocks after the starter's gun fires).]

[In addition, Libet, et al. showed that our experience of a skin stimulus precedes neuronal adequacy because the brain refers the experience retroactively to the time of stimulus, as is shown in the diagram. This required an experiment in which pulses were applied directly to the sensory cortex simultaneously with pulses applied to the hand. When this was done, the skin pulses were felt by the subject to occur before the cortex pulses (which were also felt in the hand, not in the cortex) even though it was known that the brain required the same time to process the skin pulses as the cortex pulses. Only when the skin pulses were delayed about 500 ms relative to the cortex pulses were the two pulses felt simultaneously. This showed that our perception of simultaneity and sequentiality are subjective.]

In 1983, Libet, et al. [*Unconscious cerebral initiative and the role of conscious will in voluntary action, The Behavioral and Brain Sciences* (1985) 529-566] reported an even more profound set of experiments in which a different set of subjects, these without implanted electrodes, were "volitionally" initiating muscular acts rather than responding to sensory stimuli. Electromyogram signals from a designated trigger finger were used to initiate computer storage of the EEG responses (the readiness potential, RP) that had already appeared on the

scalp prior to the triggers [see diagram below from Alexander Riegler, *Whose Anticipations?* in Butz, M., Sigaud, O., and Gerard, P. (eds), *Anticipatory Behavior in Adaptive Learning Systems: Foundations, Theories, and Systems*. *Lecture Notes in Artificial Intelligence*, Springer-Verlag (2003) 11-22].

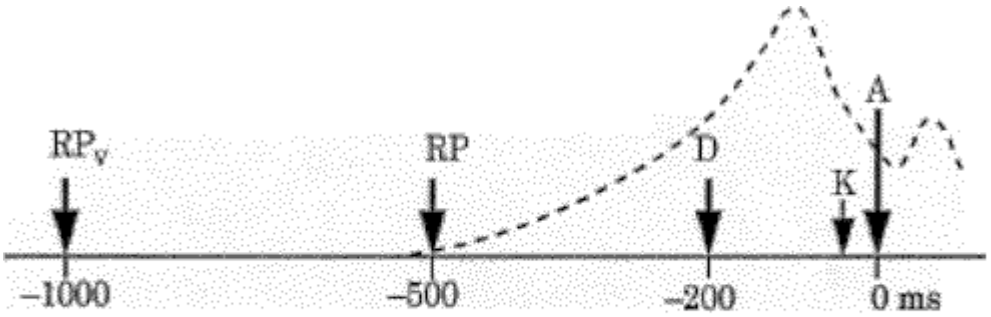
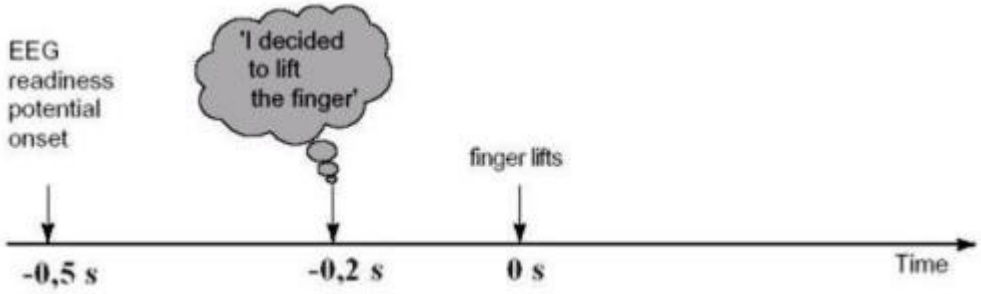


Fig. 1: Sequence of readiness potential (RP), volitional decision (D), and onset of action (A), as well as the control stimulus on the skin (K). If the action is planned ahead, the readiness potential starts already at time RP$_v$. After Libet (1985).

A simplified diagram of these results is shown below:

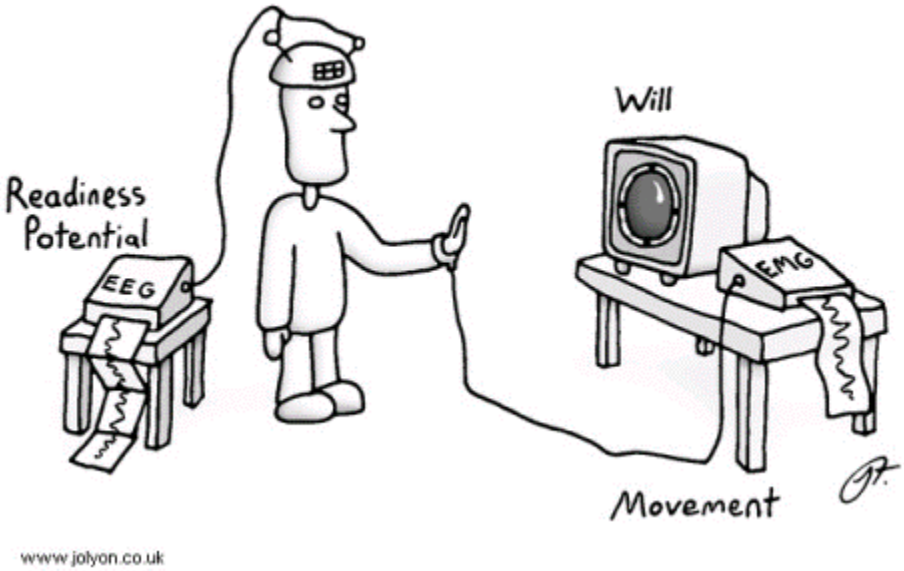


The results showed that the onset of the readiness potential RP preceded the finger action A by 550-1050 msec, but the experiential awareness of the urge to perform the action preceded the finger action by only about 200 msec. (This awareness could not be signaled by finger motion because that would require another decision for muscular action. It was measured by having the subject associate his reading of an electronic clock with the onset of his awareness of the decision.) Thus**, the brain prepares to perform a muscle act prior to the subject's awareness of any urge to act.** Libet speculated that it may be possible to consciously veto the act if it is done within the last 100-200 msec before the it is to occur. However, because there is no muscle action to trigger the recording of a veto event, experimental verification of conscious veto decisions is not possible. Regardless of that, the possibility of volitional veto decisions is overruled by the considerations in the following paragraph, and by those in Sections 5.10 and 5.12.

Libet's experiments point to a general concept that a little thought shows must always be valid. This is that **everything that happens must happen before we can become aware of it.** Any neurological or sensory process always happens before our awareness of the thought, feeling, or sensation that represents it. In Libet's experiments, the lag of awareness was between 350 msec and 500 msec, but the exact value is unimportant. So long as this lag exists, no matter how large or small, whether it is one hour or one microsecond, our subjective experience of an event must always come after the objective measurement of the event. In other words, the subjective present always lags the objective present, or subjective time always lags objective

time. [Because the brain requires about 500 msec to process an event before we can become aware of it, it is impossible for us to be aware of any instant in which the brain ceases to function, such as the instant we fall asleep (either naturally or under anesthesia), or the instant we die.]

The consequences of this insight are extraordinary, revolutionary, and far-ranging. Every thought, feeling, sensation, or action always occurs objectively before we become aware of it subjectively and hence there is no possibility that we can avoid it. This includes any choices or decisions that are made. **We inescapably live in the objective past so that the objective present and future are completely beyond our awareness and control.**



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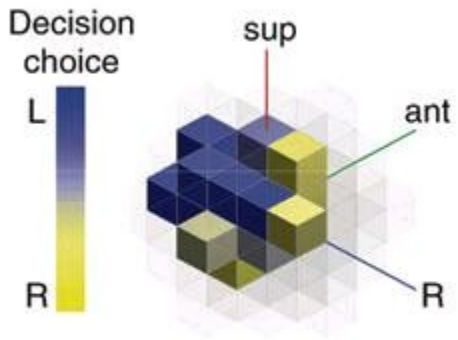
5.10. Brain imaging measurements on free will

Even more remarkable than the Libet et al. experiments, were the 2008 experiments of C. S. Soon, M. Brass, H.-J. Heinze, and J.-D. Haynes (*Unconscious determinants of free decisions in the human brain*, http://www.nature.com/neuro/journal/v11/n5/full/nn.2112.html, doi:10.1038/nn.2112), who made functional magnetic resonance images of the brain activity of a subject prior to the subject's "free" decision of whether to push a button with the right index finger or the left. In comparison to the brain preparation time of 300 ms in the Libet, et al. experiments, these experiments showed that the brain prepared the timing of the action up to five seconds before the subject's awareness of the decision. More remarkable yet, the brain prepared the handedness of the decision even before it prepared the timing, i.e., the spatial pattern of the brain images indicated which button would be pushed up to seven seconds before the awareness of which button would be pushed. (After allowing for the 2000 ms response time of the imaging equipment, left-right predictions were possible for up to ten seconds before the awareness of the decision.). In the diagram below, the dark blue brain image voxels predict a left-button push, while the yellow brain image voxels predict a right-button push.



[Note: Instead of watching a clock as in the Libet, et al. experiments, the subject observed a screen that flashed a consonant letter every 500 ms in random order. The subject then remembered the letter that was present at the subjective time of decision. The randomness of the letters ensured that the subject could not anticipate the next letter and therefore bias the timing of the awareness of the decision towards earlier times.]

Question: Suppose somebody tells you that he will raise his right arm in 10 s and then proceeds to count off the seconds after which he raises his right arm. Is that an example of free will?
Suppose he says he will raise it at some random time. Is that an example of free will?

5.11. Free will as the possibility of alternative action

The following discussion comes from Chapter 7 of the 1990 book by Euan Squires, *Conscious Mind in the Physical World*. It is a purely logical argument for the absence of free will. Whether the situations described could physically be realized is immaterial to the argument. This is similar to any mathematical proof. If we accept the validity of a mathematical proof even if the situations it describes cannot be physically realized, we must accept that the following conclusion about free will is also valid even if the situations it describes are not physically realizable.

A common definition of free will is the following: A decision is free if an agent could have decided differently.

In order to clarify this definition, we divide the universe into two parts, the agent and the external circumstances. **Our conclusions are the same regardless of how this division is made** (see next section). For example, a human agent could consist of some part of the mind-body while the external circumstances could consist of the remainder of the mind-body plus its surroundings. An inanimate agent like a thermostat could consist of a temperature sensor plus a switch while the surroundings could consist of the air around it.

We now compare the reactions of human agents, in their circumstances, with the reactions of inanimate thermostats, in their circumstances. If we first consider the reactions of identical humans and identical thermostats, the agents can decide differently only as follows:

a) A decision is free if, in different circumstances, two identical agents can make different decisions. This cannot be the meaning of free will since it would also be true if the two agents were thermostats.

b) A decision is free if, in identical circumstances, two identical agents can make different decisions. This cannot be the meaning of free will because this implies randomness, not free will, and would be true of any nondeterministic, inanimate agents, such as those that function randomly or quantum mechanically.

The following table summarizes the alternatives:

Agents	**Circumstances**	**Decision**	**True for two thermostats?**
identical	different (“Given different circumstances, even if I were exactly the same person I was then, I would choose differently”)	different	yes
identical	identical (“Given the same circumstances, even if I were exactly the same person I was then, I would choose differently”)	different	Yes, if operating randomly
different	identical (“Given the same circumstances, knowing what I do now, I would choose differently”)	different	yes

The first two possibilities are the only ones available for identical agents. Of course, different agents will react differently to the same circumstances because “different” means “not identical”. Thus, the third possibility does not imply free will because two different thermostats in the same circumstances will react differently also.

This discussion reveals the problems with any definition of free will based on the circumstances surrounding a decision. The circumstances may include the agent’s thoughts,

feelings, emotions, sensations, perceptions, and actions if these are thought of as being external to the agent. **Thus, if we try to define free will by considering the reaction of the agent to its circumstances, we are forced to the conclusion that free will as we have defined it does not exist.**

Notice that the concept of free will can arise only if there is an agent that is separate from its surroundings. This separation is the essence of duality (see Sections 11.1, 11.4). Without duality, there is neither the agent nor that which is acted upon, so free will has no meaning.

Question: Does it frighten you to think that you have no more free will than a thermostat?

5.12. The origin of the belief in free will

The belief in free will appears to originate in a mental model that we have of ourselves. "I" appear to be separated into an inner and an outer part, which we shall call I_i and I_o, respectively. The division may be between the mental and the physical, between some combination of the two, or more likely between two different mental parts. We think of I_i as having free will and being the controlling part, and I_o as having no free will and being the controlled part. In this way, the separate individual entity (I_i) may believe he/she is free to control the mind and/or body (I_o). However, if we are asked what part of the mind is the controlling part and what part is the controlled part, we are never able to provide an answer.

Exercise: Close your eyes and see if you can find I_i. Did you find it? Can you describe it? Where is it located?

We may think or feel that we reside primarily either in the head (the mind) or in the heart (the feelings). In the first case, we may think that we are heartless minds and respond to events only rationally. In the second case, we may feel that we are mindless feelings and respond to events only emotionally.

Question: At this moment, where are you residing, in the mind (the head), in the feelings (the heart), or neither? What is it that knows?

We see from this model that the separation of the universe into agent and surroundings discussed in Section 5.11 really is a separation within the mind-body organism. The belief in free will depends on our perception of an inner-outer duality within us. Without the perceived separation of ourselves into an inner object that controls and an outer object that is controlled, we could not have this belief, and free will would not be a concept that would ever arise. (In fact, as we shall see later, the belief that we are split is equivalent to the belief in free will.)

5.13. Is free will necessary for our happiness?

The existence of free will would imply that we should be free to choose our thoughts, feelings, emotions, and actions as we desire. However, are we really free to choose our thoughts and emotions? If so, why do we choose desires that cannot bring us happiness, such as any desire for the unobtainable? Why do we choose emotions like fear, guilt, hatred, anger, envy, or lust? In fact, why are we ever unhappy? Why are we not always happy if we are free to choose

happiness? In fact, even more profoundly, why can't we just stop thinking and feeling if we choose to? Our experience tells us that we cannot choose the thoughts and feelings that we will have 30 seconds from now, much less those of a day or week from now, and, worse, we cannot even stop thinking or feeling at all. In fact, every unbidden thought or feeling we have is more evidence that we are not free to choose.

Exercise: Try to stop thinking for 30 seconds. Were you successful?
Now try not to think of a pink elephant for 30 seconds. Were you successful?

Questions: When you are angry, do you choose to be angry?
When you are sad, do you choose to be sad?

If "we" think "we" have free will but don't, "we" will think "we" can control "our" thoughts and actions, but will not actually be able to do so. If "we" think "we" should have different thoughts, feelings, emotions, body sensations, and perceptions, and "we" think "we" should be able to fix them, "we" will find out that "we" cannot. Then "we" will suffer. A solution to suffering: Investigate the "me". If "we" do so, "we" might not be able to find it. No "me", no suffering.

Exercise: Whenever you are experiencing suffering (even mild dissatisfaction), look and see if you can find the "me" that is suffering. If you can find it, describe it. What is it that is aware of it? If you cannot find it, what is it that is suffering? What is the experience of suffering now like?

Thus, to pin our happiness on a chimera such as free will must doom us to a life of frustration, anger, and hopelessness. However, the opposite approach of giving up freedom is decidedly not the answer. To resignedly and fatalistically accept whatever crumbs our minds and the world throw our way is hardly a happy solution. The real solution requires us to discover what true freedom is.

5.14. Freedom as subjectivity

In the meditation for December 6 in *A Net of Jewels* (1996), Ramesh Balsekar, a sage who lived in Mumbai, India and who will be quoted frequently in this course, says,

> "Freedom is what happens when the arrogant and silly notion that we live our own lives by our own will has fallen off."

In spite of the prevalent belief in free will, it is not possible to show that free will objectively exists within the split self, as the previous sections showed. Something other than a split self must be the source of true freedom. This something is pure consciousness, which is unified, nondual, unsplit, and totally free, as we shall see in Part 2. True freedom is pure subjectivity and is an intrinsic property of pure consciousness. Freedom as pure subjectivity is not the same as freedom of choice. Freedom of choice is an illusion. Freedom as subjectivity exists even in the absence of any objective freedom of choice. In fact, we can say that true freedom is freedom from the burdens and responsibilities of an imagined free will.

Question: What is it that knows whether or not you are free?

In a completely determined universe, would freedom be possible? In such a universe, there could be no objective freedom of choice. However, the absence of objective freedom does not preclude subjective freedom independently of the objective circumstances. Thus, subjective freedom can exist whether or not the phenomenal world is completely determined. This compatibility between freedom and determinism is called compatibilism. It implies that freedom and determinism refer to different levels of reality, the purely subjective vs. the purely objective, or noumenality vs. phenomenality.

In an objectively determined universe, as is assumed by classical physics, how can there be an actual split between an inner, controlling object and an outer, controlled object? In such a universe, every object is inextricably connected with every other object, whether causally, reverse-causally (see Section 5.16), or in some combination thereof, and therefore there is no way to distinguish between a controlling object and a controlled object. Any belief in a split would then have to exist in spite of the objective evidence that an actual split is impossible.

In the probabilistic universe that is assumed by orthodox quantum mechanics, we still must ask, how does the perceived inner-outer duality arise? What can take two objects and identify one as inner and the other as outer? If we can answer this question, we may also be able to answer the question, how does the belief in free-will arise? We shall present a quantum theoretical model that attempts to answer both of these questions in Chapter 7.

5.15. If there is no free will, how do things happen?

Graphic evidence of our lack of free will is produced by the effects of drugs on our consciousness, thoughts, emotions, and behavior. Antidepressants can make us placid and lethargic. Some antidepressants drastically reduce sex drive, while others increase it. Parkinson's drugs can cause compulsive behaviors such as gambling, excessive shopping, overeating, and hypersexuality. Hallucinogenic drugs change the way the brain interprets time, reality, and the environment around us. They affect the way we move, react to situations, think, hear, and see. They may make us think we're hearing voices, seeing images, and feeling things that don't exist. Amphetamine stimulates the nervous system and combats fatigue; but in cases of ADHD, improves impulse control and concentration, and decreases sensory overstimulation and irritability. Methylamphetamine is an amphetamine that can be made cheaply and hence is used illicitly to increase confidence, exhilaration, and alertness, but with the side effects of increased aggression, irritability, and feelings of paranoia. Hypnotic drugs induce sleep and anesthetics cause unconsciousness. All mental diseases are caused by abnormal brain chemistry and/or structure, but drugs can sometimes be used to restore some semblance of normalcy.

In 2006, rigorous research showed that psilocybin (magic mushroom) can induce the single most spiritually significant experience of a lifetime (R. R. Griffiths et al., *Psilocybin can occasion mystical-type experiences having substantial and sustained personal meaning and spiritual significance*, Psychopharmacology August 2006; http://www.springerlink.com/content/v2175688r1w4862x/?p=6362cd8f4d6947aca6b55d5e3d6b17ba&pi=25).).

Recent years have seen a flood of new research on the correlation between brain activity and decision making. Two examples out of many are the following: 1) brain scans have revealed the existence of hidden thoughts without the subject's awareness of them

(http://www.nature.com/neuro/journal/v8/n5/abs/nn1445.html); 2) other brain scans have suggested that all decisions are effected by emotion even when the subject thinks they are rational (*Science,* 4 August 2006, 313: 684-687) and http://www.sciencemag.org/cgi/content/full/313/5787/684).

Scientists studying voles and human Swedish twins have discovered a gene variant involved in producing a hormone that affects monogamy in animals whereby men with two copies of the variant were twice as likely to have had a relationship crisis with their spouse or partner in the last 12 months as men who did not carry the variant (*Proceedings of the National Academy of Sciences*, 2 September, 2008, available online at (http://www.pnas.org/content/early/2008/09/02/0803081105.full.pdf+html).

In this discussion and those in Sections 5.9, 5.10, 5.11, we see that free will plays no role, so our experiences are determined solely by the reactions of the brain to its circumstances. This means that the brain must function in a purely stimulus-response mode, where a stimulus can come either from an event that is perceived by the senses, or from one that arises spontaneously in the mind, like a thought, feeling, or emotion. We now consider such a model of the brain.

A computer is a crude and inadequate, but still useful, analog of the brain (which we will assume includes the entire nervous system). The design and memory of a computer are analogous to the genetics and memory of the brain, while the programming of a computer is analogous to the conditioning of the brain. Just as a computer does only what its design and programming permit it to do, the brain does only what its genetics and conditioning permit it to do.

A computer acts on an input and generates an output, while a brain acts on a stimulus and generates a response. However, while the computer functions completely deterministically, the brain most likely functions both deterministically and probabilistically (see next section and Chapter 7).

Most computers are programmed in specialized programming operations by humans or other computers (in artificial intelligence applications, computers may also be programmed by their input-output operations). In comparison, the brain is conditioned continuously through all of its stimulus-response interactions, including not only local interactions with the environment, but also through nonlocal interactions (see Section 5.2). (Actually, this conditioning resides not only in the brain and nervous system but also in every organ of the body that possesses memory, however rudimentary, such as the musculature.) Thus, the enormous differences between a computer and a brain rest on 1) the differences between the primitiveness of a computer's design and the complexity of the brain's structure, 2) the differences between the limitations of the purely deterministic functioning in computers and the open-endedness of the probabilistic functioning in the brain, and 3) the differences between the restrictions of the specialized, local interactions of a computer and the vastness of the continuous local and nonlocal interactions of a brain.

Exercises: 1. (Easy) Watch as you are walking and see whether you are doing the walking or whether it is happening all by itself.
2. (More difficult) After you have become engrossed in something, such as reading or chatting,

think back to see whether you actually did it or whether it happened all by itself.
3. (Also difficult) After you have made what you think was a mistake, think back to see whether you actually made the mistake or whether it happened all by itself. Did you blame yourself anyway, or, if blaming happened, did it happen all by itself?

Exercise: Watch your thoughts come and go. See if you can see where they are coming from. Are you thinking them? If you think you are, see if you can see yourself doing it. Can you choose your thoughts? If you think you can, see if you can see your self doing it. Now see if you can choose to have none at all.

5.16. Speculations on the future in determined and probable universes

What does the existence of precognition and prophecy (Section 5.2) imply about the future? Here are several possibilities:

1. The future might be predetermined because of strict, deterministic causality, which implies that the past completely determines the present and future. This is the paradigm of classical physics, which is no longer thought to be valid.

2. It might be determined probabilistically, but not completely, by the past. This is the paradigm of quantum mechanics and modern physics. It implies that all experiences of precognition and precognized events are probabilistic rather than certain.

3. It might be determined through an unconventional causality that operates in a time-reversed direction so that the future rather than the past determines the present. This is the concept of destiny, which will be discussed more fully in Section 12.5. There is nothing in either classical physics or quantum physics that precludes this because microscopic physical laws are equally valid in the time-reversed direction and in the forward direction. The only reason that we apply the laws in the forward direction is because we have knowledge of the past but not of the future, which we try to predict. (The law of entropy, which was discussed in Section 2.3, is a macroscopic law not a microscopic one, and would not invalidate reverse causality because it determines only the direction of time, not the direction of causality.)

4. It might be determined by a combination of (2) and (3) in the following way: A quantum wave traveling forward in time becomes entangled with another quantum wave traveling backward in time to form a present experience that is determined and certain. (This possibility is suggested by the transactional interpretation of quantum physics, see *The Transactional Interpretation of Quantum Mechanics*, by J. G. Cramer, http://rmp.aps.org/pdf/RMP/v58/i3/p647_1 and Reviews of Modern Physics 58, 647–687*;* and *Quantum Cosmology and the Hard Problem of the Conscious Brain*, by Chris King, http://www.dhushara.com/pdf/hard.pdf).

5. The future might not be determined at all until somebody had an experience of precognition. Precognition could establish a correlation between a precognition experience in the present and the precognized event in the future. Prior to precognition, as in orthodox quantum mechanics, both the present event and the future one might be only probabilistic rather than certain. In the terminology of Chapter 6, wavefunction collapse might then manifest both the precognition event in the present and the precognized event in the future (this would imply a future that is objectively real). This would be an example of how two temporally separated events could be correlated in time, similar to the way two spatially separated events are

correlated in space in the Bell-Aspect experiments described in Section 4.3. How any of this could happen is unknown.

6. All of the past and future may exist objectively now, and it may be only a limitation of our perception that prevents us from seeing more than the perceived present (note the distinction between the objective present and the perceived present as discussed in Section 5.9). This possibility is discussed more in Sections 12.1 and 12.5.

We must be clear that any concept of a future that is determined, or of a causality that operates in reverse time, is a metaphysical concept, and there may be no experiments or observations that could ever distinguish between them. These are different from the concepts of physics, which, even though admittedly based on the metaphysical assumption of an objective reality (see Section 1.1), can be either validated (although not proved) or invalidated by experiment and observation.

Chapter 6. What does quantum theory mean?

6.1. The interpretation problem

[Technical note: The fundamental equation that must be solved in quantum physics is the Schrödinger equation:

$$i\hbar\, \partial\psi/\partial t = H\psi$$

This equation is explicitly a first-order differential equation in time, but is implicitly second order in space since H is second order in the spatial derivatives. The equation describes how the Schrödinger wavefunction ψ propagates in time and space. It must be solved explicitly for ψ.]

In contrast with classical physics, in which the results of an observation are implicit in the theory itself, quantum theory requires an interpretation to relate the theory to an observation. There are three broad categories of interpretations.

6.1.1. Purely objective interpretations

In a "hidden variables" interpretation, Schrödinger's equation is correct but incomplete as it stands. In this interpretation, quantum theory must be supplemented by the addition of classical particles, which are always present. These particles are assumed to have definite positions and velocities but they are unknown so are called hidden variables. The wavefunction is not interpreted as a probability function, but as the source of a quantum force (also a hidden variable) which acts on the particles in addition to the classical forces of electromagnetism and gravity. In its pure objectivity, this interpretation is the most like classical physics.

6.1.2. Partly objective and partly subjective interpretations

a) In the Copenhagen interpretation, the wavefunction exists objectively prior to an observation. At the moment of observation, the wavefunction collapses to describe the results of the observation. In this interpretation, quantum theory is either incorrect or

incomplete as it stands because it must be modified to describe the phenomenon of wavefunction collapse. Because collapse is not understood, this is sometimes called the "shut up and calculate" school, a term attributed to American physicist David Mermin, *Physics Today,* May 2004, p. 10. If conscious observation is assumed to be what collapses the wavefunction, this interpretation is partly subjective. If some as yet uncertain, nonstandard, objective mechanism collapses the wavefunction, this interpretation is purely objective.

b) In the "many-worlds" interpretation, the wavefunction is assumed to be primary and unchanged by observation. However, at the moment of observation, each possibility in the wavefunction manifests in an observed world so there are as many observed worlds as there are possibilities. Because branching requires observation, this interpretation is partly subjective.

c) In the interpretation of Christopher Fuchs, there is an objective system but there is no wavefunction. However, everything we know about the system is in the form of subjective beliefs.

6.1.3. Purely subjective interpretations

Some physicists think that, if there is an objective reality, it is not described by quantum theory. They think the theory can be used only to calculate the probabilities for the different possible outcomes of a given observation. To them, this is the only interpretation that quantum theory has. This can be called a subjective interpretation because the wavefunction reflects only our knowledge of a situation rather than describing an objective reality.

6.2. The hidden-variables interpretation: A purely objective interpretation

One reason we abandoned classical particles was because we showed they could not go through two slits at once and produce interference, whereas waves could (see Section 4.1). But interference is possible with classical particles if there is also a wave present. A theory that includes both is the hidden variable theory developed by David Bohm (1917 - 1992) [brilliant, unconventional American-Brazilian physicist who left the U.S. never to return after being blacklisted in 1949 by Senator Joe McCarthy during the anticommunist hysteria, was arrested and charged with contempt of Congress after pleading the Fifth Amendment and refusing to recant his Marxism, was fired by Princeton University, was later acquitted by the court but lost his American citizenship]. This is the best developed and best known of the hidden variable models. This model is fully deterministic and assumes that the particles are classical and are subject to classical forces (which are all local). However, they are also subject to a quantum force that is derived from a wavefunction. [To be more accurate, there is a quantum potential that is derived from the wavefunction, and the quantum force is derived from the quantum potential.] The wavefunction is now not a probability wave. Since the particles are assumed to be classical, their positions and velocities are always definite, even before an observation. Contrary to the Copenhagen interpretation, the wavefunction in the hidden-variables interpretation is not a complete description of the system because the particle positions are also required. In the initial state, the wavefunction specifies the actual distribution of particles in space, not just a probability. The time development of the wavefunction is then described by Schrödinger's equation, as in ordinary quantum theory.

Although the wavefunction now has a different interpretation, it is mathematically identical with that in the Copenhagen interpretation and contains all parts of the waves, e.g., reflected and transmitted parts, or the parts going through different slits, even if none of the particles follow those paths. (A peculiarity of the quantum force is that it can be very large even where the wavefunction is very small.) Since the wavefunction, and therefore the quantum force, depends on all parts of the experimental apparatus (e.g., in a two-slit experiment) so do the particle trajectories, even though trajectories and apparatus may be quite distant from each other. The result is that the quantum force from all parts of the apparatus acts simultaneously on all of the particles--hence, it is nonlocal.

Since the particles in a hidden-variables interpretation are assumed to be classical, there is no wavefunction collapse, and therefore it is not necessary to introduce consciousness into the interpretation. Hence, hidden-variables theories are consistent with scientific materialism (see Section 1.2). They are examples of "realist" theories because they assume that the particles are real particles, not just quantum waves.

Question: If the hidden variables interpretation were correct, how would your life be affected?

The Bohm theory is not the only possible hidden-variables theory. However, we have already seen that the Aspect experiments excluded all local hidden-variables theories, while the Gröblacher experiments excluded most hidden variables theories whether they are local or not (Section 4.3). Because of these experiments, we shall conclude that it is not likely that hidden-variables theories describe reality.

6.3. The Copenhagen interpretation: A partly objective and partly subjective interpretation

In this interpretation, before an observation there are no particles, only a wavefunction that is a complete description of the system. No other information about the system is possible. At the moment of observation, the wavefunction must change from a probability wave that includes all of the possibilities that existed before the observation to one that describes only the possibility that is observed. This is called reduction, or collapse, which is not explained by the theory. In this interpretation, the wavefunction is the only external, objective reality that exists prior to an observation.

The Copenhagen interpretation is so named because it was formulated at Niels Bohr's Copenhagen institute in the 1920s. That the wavefunction is the only objective reality is summed up in Bohr's statement, "There is no quantum world. There is only an abstract quantum description" (quoted in Nick Herbert's book, *Quantum Reality* (1985) p. 17), and in the statement of John Archibald Wheeler (1911- 2008, brilliant American theoretical physicist and cosmologist who coined the term "black holes"): "No elementary phenomenon is a real phenomenon until it is an observed phenomenon" (quoted in Herbert's book, p. 18).

6.4. What can make an observation in the Copenhagen interpretation?

(In this and the following two sections, we draw heavily on Chapter 11 of the 1990 book by Euan Squires, *Conscious Mind in the Physical World*.) We will first show that any system that is completely described by quantum theory cannot exhibit wavefunction reduction.

In order to do this in the most efficient manner, we will use a symbolic notation that makes the description concise and precise. Do not let this frighten you--it is simply a notation, not higher mathematics. The notation will refer to a particular type of experiment with particles that have spin. The spin of a particle is related to its rotation. A macroscopic analog is a spinning top. We can say that if the top is spinning normally on a flat, smooth surface, the spin (like the top) is pointing down. If for some reason, the top flips so that it spins upside down (there are tops that do this), we can say the spin is pointing up. Particles with spin (like the electron) can have their spins pointing either up or down.

We start with an experiment in which an incoming electron is in a superposition of spin-up (+) states and spin-down (-) states. By superposition, we mean that the wavefunction is a sum of two terms, one describing the + state, and one describing the - state. The superposition sums all of the possible states of the system. This is an example of what is called a "pure" state. The notation we now introduce is called the Dirac "ket" notation. Instead of writing the wavefunction simply as ψ as we did before, we enclose it in ket brackets and write $|\psi>$. We use the same kind of notation for the + and the - states, and obtain

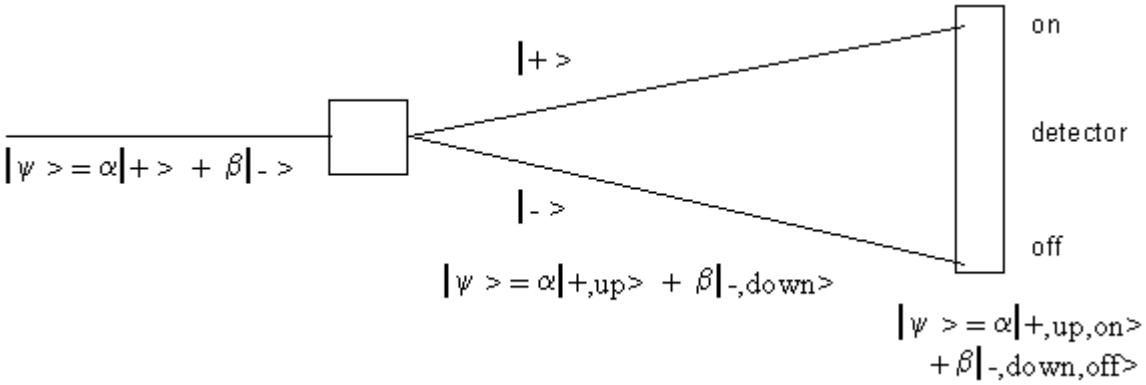
$$|\psi> = \alpha|+> + \beta|->$$

All this equation says is that the electron is a wavefunction consisting of a superposition of a spin-up component and a spin-down component. Here, $|\alpha|^2$ is the probability that an observation would see a spin-up particle, and $|\beta|^2$ is the probability that it would see a spin-down particle. (These are written with absolute value signs because α and β are in general complex quantities. However, this detail need not concern us here.)

We now send this electron into a "Stern-Gerlach" apparatus. This contains a nonuniform magnetic field which causes the $|+>$ component of the wavefunction to go upward and the $|->$ component to go downward. Therefore, after the electron passes through the apparatus, the Schrödinger equation tells us that it is described by the pure state wavefunction,

$$|\psi> = \alpha|+,up> + \beta|-,down>$$

where it is obvious that $|+,up>$ goes up and $|-,down>$ goes down. This wavefunction is not arbitrary--given the initial state wavefunction and the characteristics of the Stern-Gerlach apparatus, the Schrödinger equation dictates this form. We now send the electron into a detector, which records "on" if the $|+>$ component is detected and "off" if the $|->$ component is detected. (The labels "on" and "off" are purely arbitrary. They could also be called, e.g., "1" and "0".) To make this clear, a diagram is shown below.



We assume that the detector, like the rest of the system, is described by the Schrödinger equation. We must then include the state of the detector in the wavefunction, and the pure state becomes

$$|\psi> = \alpha\,|+,up,on> + \beta\,|-,down,off>$$

This leads to a very important conclusion. **Any object in the system that can be described by the Schrödinger equation must be included in the superposition of terms describing the system**. The Schrödinger equation always converts a pure state into a pure state. A pure state wavefunction will always be a superposition, which means that there is a probability of finding the system in either state.

Reduction, or collapse, of the wavefunction requires going from a pure state consisting of a superposition to a final state consisting of only one term because the reduced wavefunction must describe the detector being in either one state or the other, but not both. **Therefore, no object that can be described by the Schrödinger equation can reduce the wavefunction, i.e., make an observation.**

6.5. Wavefunction reduction in the Copenhagen interpretation; the forward direction of time

Now suppose that I look at the detector and that I also can be described by the Schrödinger equation. Two components are needed to describe me, which we will call me^+ and me^-, with the obvious connotations. The final wavefunction will be the pure state,

$$\psi> = \alpha\,|+,up,on,me^+> + \beta\,|-,down,off,me^->$$

However, if I am aware of the final state of the detector, this wavefunction cannot describe the combined system since I know that the detector is either in the "on" state or the "off" state. Something has effectively collapsed the wavefunction so that only one term remains.

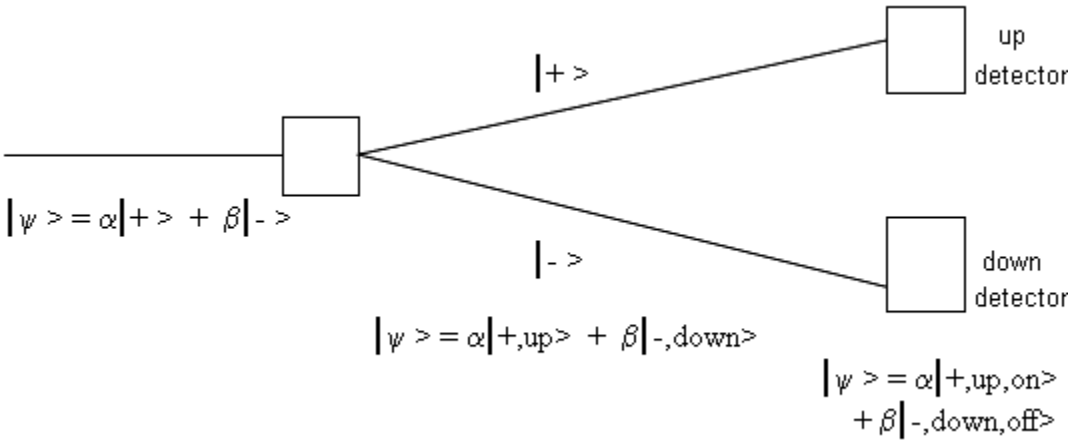
In the Schrödinger cat paradox of Section 4.2, I observe the cat in either the live state or the dead state, not both. If consciousness collapses the wavefunction, it is either my consciousness or the cat's that does it. It is a metaphysical question which of the two consciousnesses it is because what I see when I open the box will be exactly the same in both cases.

Because most physicists are materialists and believe that consciousness is at most an epiphenomenon, they do not like to admit that consciousness could collapse the wavefunction since an epiphenomenon could not have the power of agency. Rather, they prefer to think that some physical mechanism such as the decoherence described in Section 6.7 causes collapse. However, decoherence does not describe collapse. It only explains the disappearance of interference between the two terms of the wavefunction.

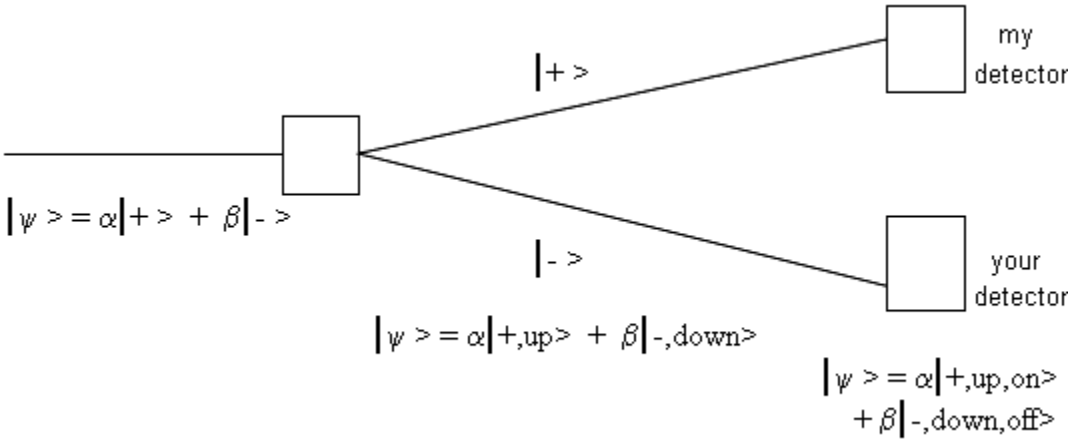
In the Copenhagen interpretation, wavefunction reduction defines the forward direction of time because the reduced state is irreversible. This is true for both microscopic and macroscopic systems. Recall from Section 2.3 that, in classical physics, the second law of thermodynamics determined the forward direction of time because macroscopic natural processes are statistically irreversible. In classical physics, irreversibility is a property of a system whether or not it is observed, while in the Copenhagen interpretation, irreversibility is a result of observation itself.

6.6. Nonlocality in the Copenhagen interpretation

In this section, we shall assume the Copenhagen interpretation. We also assume that the incoming wavefunction represents a single electron. We now suppose that we have a Stern-Gerlach experiment with two detectors instead of one, as shown in the figure below. One detector is set up to record the $|+,up>$ part of of the electron wavefunction, and the other is set up to record the $|-,down>$ part. The detectors may be arbitrarily far apart. At the instant of wavefunction collapse, what prevents both detectors from simultaneously recording the electron? This example shows that no local process can collapse the wavefunction because such processes cannot prevent simultaneous or near-simultaneous coincidences between the detectors. Hence, we must conclude that **wavefunction collapse cannot be produced by any known physical process (which are all local).** (This result also can be inferred from the Bell-Aspect experiments, see Section 4.3.) Since the wavefunction collapses over all parts of space simultaneously or nearly simultaneously, it is an intrinsically nonlocal phenomenon. Thus, any interpretation of quantum theory requiring wavefunction collapse is not consistent with a local theory of reality, or with a philosophy such as materialism or scientism (see Section 1.2).



Now suppose there are two observers, you and I (see figure below), so that you observe the |-,down> state while I simultaneously observe the |+,up> state. Then when I observe my detector to record "on", you must observe your detector to record "off" because there is only one electron. Thus, if consciousness collapses the wavefunction, it must be the same consciousness that collapses it at both detectors. **Therefore, there can be only one consciousness and it must be nonlocal.**



This conclusion can be illustrated in a much simpler example than the experiment described above. We still assume that an object is represented by a wavefunction prior to an observation. Now suppose two observers make simultaneous observations of the same object whose color is unknown before the observation. In this case all possible colors must be represented in the wavefunction of the object before it is observed. Then why do both observers observe the same color rather than one observer observing, for example, a red object and the other observing a blue object? If consciousness collapses the wavefunction, the answer must be that the consciousness of both observers is the same consciousness. **Thus, the consciousness of all sentient observers is the same nonlocal universal consciousness.**

If the wavefunction is considered to be objectively real and the observation is considered to be subjective, the Copenhagen interpretation is a modern example of Cartesian dualism (see Section 1.3).

Problem: Suppose you live on the Starship Enterprise and I live on earth 4 light-years away. By communicating with each other using powerful laser signals, we have decided to make simultaneous observations on the date Stardate 2200.0 to look for a lone hydrogen molecule that we know from previous measurements (don't ask) is coming from type 1C supernova 2199K. We don't know whether we will be able to observe it but if we do, only one of us will be able to do so since the wavefunction represents only one such hydrogen molecule.

The wavefunction of the hydrogen molecule extends over all space and represents a molecule that could be anywhere in space. If the molecule is observed, the Copenhagen interpretation says that the wavefunction immediately collapses to one that is allowed by the observation. This means that the wavefunction is now confined to a small region of space near either you or me but not both.

During our observation, there is no time for any kind of signal to pass from you to me or me to you. The wavefunction itself does not predict which one of us will observe the molecule. It only predicts that there is a certain probability that you will see it and a certain probability that I will see it. So why can't we both observe the molecule simultaneously? (Don't say it's because there is only one molecule—there is no molecule at all until it is observed. Until then, there is only a wavefunction.)

Now let us consider the Stern-Gerlach experiment but without reference to quantum theory. In this case, there is no wavefunction before observation. It is apparent now that the consciousness of the observers must be universal consciousness if both observers are to see the same object. Thus**, whenever we assume that objects appear only as mental images, not as independently existing objects, the consciousness of the individual observers must be universal consciousness.** Of course, in this example, even the observers themselves must be mental images.

In everyday life, we think that different observers see the same object because the objects are objectively present. Thus, we are unaware that universal consciousness is the only consciousness that is operating.

Question: Assume there is no objective reality. You see a red object and I see a blue object. What is a possible resolution of this conflict?

Question: Is there any way the Copenhagen interpretation can be true?

6.7. The many-worlds interpretation: A partly objective and partly subjective interpretation

This interpretation was invented by Hugh Everett (1930-1982) in 1957 as a theory that would not require wavefunction collapse.

[Biographical note: Hugh Everett published his many-worlds theory as his Ph.D. thesis at Princeton University under John Wheeler. In 1959, his theory was scorned by Neils Bohr (who was wedded to the Copenhagen interpretation) but by this time Everett had already left physics to join the Pentagon to work on mathematical weapons policy research. He later co-founded several companies, which continued to do weapons studies for the military. He promoted the use of game theory in weapons policy, and helped to create the policy of Mutual Assured Destruction to prevent the U.S. from launching preemptive nuclear war against the USSR and China, which he had calculated would lead to unacceptable loss of life.]

Many-worlds theory was later adopted by cosmologists to describe the early universe. According to cosmology, the universe exploded from a point at the time of the big bang approximately 14 billion years ago. Early on, the universe was so tiny and its density was so high that its gravitational forces were enormously high. In such conditions, gravity cannot be treated classically so it must be described quantum mechanically. Even though as yet there is no quantum theory of gravity, physicists think that the initial universe must be described by a wavefunction. By definition, in this case, there can be no external observer. Therefore, there can be no wavefunction collapse, and quantum theory is assumed to be correct without any corrections or additions.

Let us now look at the Stern-Gerlach experiment in the light of the many-worlds interpretation. We return to the wavefunction that describes my observation of the detector:

$$|\psi> = \alpha\,|+,up,on,me^{+}> + \beta\,|-,down,off,me^{-}>$$

There can be no reduction of the wavefunction now. Both terms must describe reality. The many-worlds interpretation says that at the moment of an observation, the world splits, or branches, and that both branches continue after the observation. There is a me in both branches. This interpretation maintains that in each branch, the me in that branch is aware of only the observation that it made. Since in my world, I am aware of only one result, I exist only in my branch. In the other branch, the other me is aware of the other result. The two branches do not communicate with each other, so the two mes are unaware of each other.

[Technical note: Assuming all of this to be true, what then is the interpretation of α and β? The probabilistic interpretation of quantum theory says that $|\alpha|^2$ and $|\beta|^2$ are the statistical probabilities of each outcome. These probabilities can be measured only by making many observations on identical systems. What can they mean here when we have only one system (the universe)? Bryce S. de Witt in 1970 proposed the following interpretation. In the first trial of such an experiment, both branches result from the observation. If I now make many observations with my apparatus in my branch, I will measure probabilities that agree with $|\alpha|^2$ and $|\beta|^2$. At each observation, there will be another branching, which will result in this me being in my branch, and another me being in another branch. If each of these other mes continues the observations, he will also measure probabilities which agree with $|\alpha|^2$ and $|\beta|^2$.]

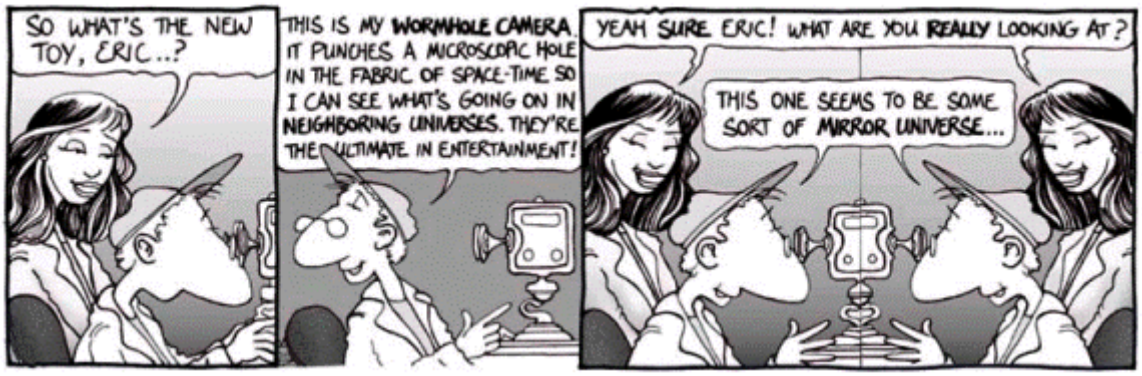
Quantum theorists (see, e.g., Maximilian Schlosshauer, Kristian Camilleri, http://arxiv.org/PS_cache/arxiv/pdf/0804/0804.1609v1.pdf) have realized that Eq. 1 is not a realistic description of the situation because it omits entanglements between the two terms on the right and terms describing the environment, including air molecules, physical apparatus, photons, and the rest of the universe. When such interactions are included, the system decoheres and interference between the two terms disappears. Without interference, the terms describing the macroscopic objects (the detector and me) become similar to a classical representation of macroscopic objects except that the terms still refer to wavefunctions instead of positions, velocities, and orientations. Also, because there has been no collapse, all of the terms remain present and all of them contain interactions with the rest of the universe. Thus, each term represents an entire universe that is very subtly different from the universe represented by the other term. In this sense, the theory is indeed a many-worlds theory.

It is easy to see that the number of branches rapidly proliferates as the observations continue. In addition, most observations on most types of systems will result in not just two branches, but many more, as many as are allowed by Schrödinger's equation. In fact, the number of branches at each observation is usually infinite. Also, like the Copenhagen theory, many-worlds theory is nonlocal because all parts of an entire branch (world) are materialized simultaneously.

While the many-worlds interpretation is very economical in terms of the number of concepts required in the theory, it is grossly extravagant in terms of the complexity of the world it describes. Furthermore, the existence of the other branches is intrinsically unverifiable--they

are hypothesized merely to preserve the mathematics of quantum theory. It is these features that most physicists find hard to accept.

Question: Is there any way the many-worlds interpretation could be true?



6.8. The similarity between the Copenhagen and many-worlds interpretations

In the many-worlds interpretation, after a branching, I am in only my branch, and I observe only my branch. As far as I am concerned, the other branches are not materialized. The advantage of many-worlds is that the unobserved branches can still be represented by wavefunctions even though they are not observed. Thus, many-worlds theory does not require any mysterious reduction mechanism to get rid of the unobserved wavefunctions, even though some mysterious mechanism is required to materialize my branch. Cosmologists think this mysterious mechanism could be epiphenomenal consciousness that arose after the wavefunction evolved into enough complexity (this assumes that space-time is objectively real). If we stipulate that the unobserved branches remain unmaterialized, the many-worlds and Copenhagen interpretations are very similar, and for our purposes can be considered to be equivalent.

6.9. The astonishing implications of the nonlocality of consciousness

In Section 6.5, we saw that all quantum systems are nonlocal, not just those of the Aspect and Gröblacher experiments described in Section 4.3. The Copenhagen interpretation includes observations but contains no physical mechanism for nonlocal wavefunction collapse. Hidden variables theory is intrinsically nonlocal because of the nonlocal quantum force, but includes no observations. Many-worlds theory includes observations but its explanation for nonlocality is that the wavefunction, which is a purely mathematical, not a physical object, is nonlocal. Thus, physics has no physical explanation for the nonlocality of observation. (This is reminiscent of Gödel's theorem, which we discussed in Section 5.6.) We must now begin to question our assumptions about the reality of space and time. We shall say more about this in Section 7.1 and Chapter 12.

As we have seen in Sections 6.4 and 6.5, if it is consciousness that collapses the wavefunction (or that materializes a branch as in Section 6.7), then consciousness must be nonphysical. If it is nonlocal universal consciousness, we are faced with some other far-reaching conclusions.

What two individual observers see is determined by universal consciousness, not by any kind of individual consciousness that might exist. This applies to all of our sensory perceptions without exception. Since everything we perceive is determined by universal consciousness, it makes no sense to say that there is a material world independent of consciousness. Thus the dualism of mind and matter is excluded.

It is only a small step now to suppose that, if all of our sensory perceptions are determined by universal consciousness, then so also are all of our thoughts and feelings because there is no intrinsic difference between them (as we shall see in Chapters 9 and 23). If all experiences are determined by universal consciousness, then we must conclude that nothing in our lives that we consider to be "ours" as individuals is truly ours. If everything flows from universal consciousness, "our" lives are not our lives at all but are lives of universal consciousness. "My" consciousness cannot really be mine, nor can there be any free will if none of "my" thoughts is mine. Even the thought that I exist is not mine. With these astounding conclusions, we are forced to ask the questions, "Do I really exist?", and, "What am I, really?" We shall consider these questions later in the course.

Question: If you really knew that you are universal, nonlocal consciousness, could you still suffer?

6.10. The interpretation of Christopher Fuchs; a minimally objective, mostly subjective interpretation

Christopher Fuchs (http://arxiv.org/PS_cache/arxiv/pdf/1003/1003.5209v1.pdf) is pioneering an interpretation which contains no wavefunction at all. Quantum probabilities are interpreted as Bayesian probabilities, which are measures of states of belief, as contrasted with the more common case of quantum probabiliies as measures of the physical properties of a system. Bayesian probabilities are calculated as updates from prior probabilities using a standard set of procedures and formulas (http://en.wikipedia.org/wiki/Bayesian_probability). Fuchs has given these formulas a quantum interpretation.

Without wavefunctions, quantum mechanics has no problems or paradoxes of nonlocaliy, collapse, or branching. This, perhaps, is the strongest argument for a subjective interpretation.

[Historical note: British mathematician and Presbyterian minister Thomas Bayes (1702-1761) proved the special case, which is called Bayes' theorem, of the more general "principle of insufficient reason" of French mathematician and astronomer Pierre-Simon Laplace (1749-1827).]

6.11. The purely subjective interpretation

In physics, objective reality is defined as that which exists whether or not it is being observed. A fundamental problem with this definition is that it can never be verified by observation because all of our observations, without exception, are purely subjective and can never go beyond the mind (see Section 1.1).

Classical physics is assumed to describe objective reality as it is (see Section 2.2). There is broad agreement among physicists on what classical objective reality is. However, quantum

theory is purely mathematical and requires an interpretation to relate it to some form of reality (see Section 6.1.). Most interpretations relate the theory to some kind of objective reality, even if the reality consists only of objectively real brain states. Since there are many interpretations and hence many objective realities, how are we to know which one is correct?

As we saw in Section 4.1, interference suggests that physical waves are interfering, whether or not they are identified with the wavefunction. Identifying them with the wavefunction is tempting because they produce the same kind of interference pattern that the wavefunction would produce were it a physical object. Yet, this leads to the nonphysicality of nonlocality, collapse, or branching. Perhaps this dilemma is Nature's way of hinting to us that there is no such thing as external, physical reality.

In Section 6.1.3, we mentioned the possibility that the wavefunction is not a physical wave but is merely a tool for calculating the probabilities for certain specified events to be observed. If this is so, there is no external quantum wave either before or after an observation. In this interpretation, only many measurements on identical systems can be compared with the theory because the theory says nothing about a single measurement. Therefore, this is sometimes called the statistical interpretation.

A few physicists hold this viewpoint because it avoids all of the problems of nonlocality, collapse, and branching ("*Quantum Theory Needs No 'Interpretation*' by Christopher Fuchs and Asher Peres, Physics Today, March 2000, p. 70, and "*Letters*", Physics Today, September 2000, p. 11). Another viewpoint, espoused by David Mermin, "*What's Bad About This Habit*", Physics Today, May 2009, p 8, states that all of our theories represent only our state of knowledge, but they need not describe reality as it is. These physicists do not deny the possibility of the existence of an external reality independent of what observers perceive, but they do not state what its significance would be.

Fundamental to the assumption of an objective reality is the assumption that spacetime exists. In quantum theory, spacetime is the absolute, unchanging context in which everything happens. In general relativity (gravity theory, see Section 2.6), space, time, matter, and energy all depend on each other and are the content of the theory. The two theories are incompatible because absolute context is not relative content. Hence, a unified theory of quantum gravity has not been found and probably will not be found unless context and content can somehow be reconciled. One way to resolve this incompatibility is to see that spacetime is purely subjective rather than objective (see Section 12.1). If spacetime is a concept in the mind rather than the context of the mind, then objective reality is also a concept because separation between objects must occur in spacetime. This viewpoint is consistent with the teaching of nonduality, in which separation is conceptual, not real (see Chapter 9).

A subjective interpretation of quantum theory would relate the theory to mind states (not brain states) and would thereby avoid the problems of objective reality. It would be related to the philosophy of idealism, the philosophy that all is consciousness and there is nothing but consciousness (see Section 1.4), but not equivalent to it because the subjective interpretation need not say anything about pure consciousness. A subjective interpretation would be an epistemological interpretation, i.e., an interpretation in terms of subjective knowledge, whereas all other interpretations are ontological, i.e., they are theories of objective existence. The interpretation of Christopher Fuchs, et al. (see Section 6.10) is only partly subjective because it

assumes that there is an objective quantum system although everything we can know about it is subjective. The only working physicist I know who states that the universe is purely mental is Richard Conn Henry (http://www.newdualism.org/papers/R.Henry/436029a.html).

Even if there is no objective reality there might be other minds. As with objective reality, we cannot objectively verify that other minds exist because the contents of them (thoughts, feelings, emotions, body sensations, perceptions) are not directly perceivable to us. We can only infer or intuit that they might exist.

We normally assume that there are at least two minds, mine and yours. So, how do our minds communicate? In the absence of objective reality, there can be no physical mechanism for communication, so we can say that if minds can communicate with each other, they cannot be truly separate from each other. Furthermore, communication requires a language--but the language we use is that of objective reality. So, even in the subjective interpretation, we use objective language! This requires agreement on the definitions of the "objects" observed, a comparison of observations, and agreement on the results of observations (see Section 1.1).

We cannot prove the existence of an external objective reality because all of our experiences are purely subjective and can be explained in purely subjective terms without invoking the concept of an objective reality. Assuming there is no external reality, our concepts of nature are limited by the kinds of experiments we do and by the type of theory that we use to interpret them. Our present picture of the microscopic world as consisting of atoms, molecules, and elementary particles is determined in an essential way by these limits. Radically different kinds of experiments and theories might produce a radically different kind of picture.

The three general classes of interpretations of quantum theory are the following:
1) Purely objective. In classical physics, this would be a purely materialistic interpretation. In quantum physics, it could be a hidden variables interpretation, or a many worlds interpretation when there are no observers, as in the early universe. If consciousness exists, it is an epiphenomenon of the material world and has no agency. The material world determines all of our experiences.
2) Partly objective and partly subjective. Classically, this would be a Cartesian dualistic, or mind/body interpretation. In quantum physics, it could be a Copenhagen interpretation if consciousness collapses the wavefunction, or a many worlds interpretation if consciousness causes a branching. In both cases, it is consciousness that manifests the material world.
3) Purely subjective. Classically, this would be an idealistic interpretation, such as Plato's or Berkeley's. In quantum physics, a purely subjective interpretation need have no wavefunction, but if it did, the wavefunction would be purely a tool for calculating the probability that a subjective experience would occur.

How would your life be different if each of the three different interpretations were true?

6.12. Physics is the study of the mind!

As we discussed in Section 1.1, because all of our experience is subjective, it is clear that the existence of an external reality can never be verified by observation and thus it can only be a metaphysical assumption. Furthermore, if objective reality cannot be observed, it cannot affect any observation because an effect on an observation is an observation. Thus, the concept of

an external reality is both unsupportable and unwarranted. However, even though an external reality can itself have no effects, the concept of one certainly can. In fact, in Chapter 9 we shall see that it is this concept that causes all of the suffering there is.

It is ironic to think that the careful, painstaking, empirical and theoretical study of external physical reality, which is what we call physics, could lead to the conclusion that there is no such reality! It appears that the hypothesis of external reality contains the seeds of its own destruction! What physicists really do is to study their own minds because that is the only place where objects are present. Perhaps the domain of physics will some day shift from objectivity to subjectivity, and physicists will begin to welcome the sages as friends rather than viewing them with suspicion.

Questions: Assuming there is no consciousness but nonlocal universal consciousness, what might be the definition of mind? If we infer that there are such things as different minds, what is the basis for this inference? Why does it seem so compelling? Would the inference of an objective reality be just as compelling? If so, why? If not, why not?

Exercise: Become aware of your sense of awareness. Is it a thought or feeling, or neither? Can it be present without thoughts or feelings? Can thoughts or feelings be present without it? Look inward and use your intuition!

Part 2. The metaphysics of nonduality

Preface to Part 2.

Part 1 depended heavily on logic to make its points. However, in order to understand Part 2, we must invoke intuition as well as logic because it points to that which cannot be described logically. Parts of it are scientifically plausible and eventually testable by experiment, parts are scientifically tantalizing but can never be tested, parts are verifiable within one's own experience, parts are acceptable only if the sage who teaches them is trusted, and parts cannot even approach understanding until enlightenment occurs. Taken together, this material is a bridge between the science and philosophy of Part 1 on the one hand, and the teachings of Part 3 on the other. It is an attempt to conceptualize something that by its very nature cannot be conceptualized.

In this part we critique the writings of the physicist Amit Goswami; heavily draw on the writings of Ramesh Balsekar and Wei Wu Wei who are two of the few contemporary spiritual teachers who delight in metaphysics; criticize the popular spiritual teaching which manifested as *A Course in Miracles;* and quote some material from conventional psychology and nondual Eastern Philosophy.

Chapter 7. Summary and critique of Amit Goswami's interpretation of quantum theory within monistic idealism

7.1. The physics of monistic idealism

Until now, except for the subjective interpretation of quantum theory, the physics that has been discussed is based on the concept of an external, objective reality verified by experimental

observations and, as long as the alternative interpretations of quantum theory that were presented are included, it would probably receive consensus agreement among most physicists. However, the present chapter is much more speculative. In it we present some of the results from Amit Goswami's 1993 book, *The Self-Aware Universe*. We shall see that Goswami assumes the validity of the concept of an objective reality, but is forced into a questionable extension of this concept into a realm that is unmeasurable and unverifiable, the transcendental realm. We cite Goswami's theory as a good example of the quandary that results when an objective theory is postulated to explain subjective experience.

Goswami attempts to place his quantum theory of consciousness within the overall context of monistic idealism (see Section 1.4). In so doing, he postulates that consciousness has the following structure:

a) Consciousness, the ground of all being, is primary.

b) Consciousness contains the following three realms: the two immanent realms, which are the world of matter and the world of mental phenomena; and the transcendental realm. All of these realms exist within and as consciousness, so there is nothing outside of consciousness.

c) The transcendental realm is the source of the immanent realms. In his theory, the immanent realms are the phenomenal manifestation of the transcendental realm.

Traditional idealism holds that consciousness is the primary reality, and that all objects, whether material or mental, are objects within consciousness. However, it does not explain how the individual subject or experiencer in the subject-object experience arises. Even traditional monistic idealism, however, states that the consciousness of the individual subject is identical to the consciousness that is the ground of all being. The sense of separation that we feel is an illusion, as has always been claimed by the sages.

The sages proclaim that separation does not exist in reality. Ignorance of our true nature gives us the illusion of separateness, and this sense of separateness is the basis of all of our suffering (see Chapter 11). Monistic idealism tells us that the sense of separation is illusory, but Goswami's interpretation of quantum theory within monistic idealism goes further by purporting to explain how the illusion arises.

As we saw in Section 6.9 , if wavefunction collapse is the mechanism for manifestation, it must be simultaneous everywhere. Yet, in an objective theory, how can it manifest everywhere simultaneously without violating Einstein locality? Goswami replies that, in monistic idealism, wavefunction collapse does not occur in space-time because wavefunction collapse is what manifests space-time. He argues that the wavefunction exists not in space-time, but in a transcendental domain. Therefore, wavefunction collapse does not violate Einstein locality.

The transcendental realm must not be thought of as including, or as being included in, the physical world of space-time. Transcendental in this context means absence of space-time. The transcendental realm cannot be located or perceived. It can be pointed to but only by pointing away from all that is perceived--not this, not that, not anything known, not anything knowable.

Recall that, in our adaptation of Plato's cave allegory (see Section 1.4), the material world consists of the shadows of Plato's transcendental archetypes. In Goswami's picture, the wavefunctions are the equivalent of the transcendental archetypes. Consciousness manifests the immanent from the transcendent by collapsing the wavefunction. All of this occurs entirely within consciousness.

7.2. Schrödinger's cat revisited

We recall that the cat paradox (Section 4.2) was invented by Schrödinger to point out the strange consequences of coupling the microscopic with the macroscopic in such a way that both must be included in the wavefunction. Let us review this paradox.

A radioactive atom, a Geiger counter, a vial of poison gas, and a cat are in a box. The atom has a 50% chance of decaying in one minute. If it decays, the Geiger counter is triggered, causing the poison to be released and the cat to die. If it does not decay, the cat is still alive after one minute. At one minute, I look to see if the cat is alive or dead. We assume that everything in the box can be described by quantum theory, so before I look there is nothing but a wavefunction. The wavefunction contains a superposition of two terms, one describing a dead cat and one describing a live cat. Before I look, there is neither a dead nor a live cat. When I look, I do not see a superposition, I see either a dead or a live cat. The dead cat part of the wavefunction represents, with increasing probability, a cat that may have been dead for any time up to one minute.

The idealist interpretation of Goswami states that, before observation, the cat is in a superposition of live and dead states and this superposition is collapsed by our observation. This is similar to the Copenhagen interpretation, except that in Goswami's version, the superposition of states is in the transcendental realm, while in the Copenhagen case, the superposition is in physical space-time. Any conscious observer including the cat itself, or even a cockroach in the box, may collapse the wavefunction. Different observations, whether by the same or by different observers, will in general have different results, but only within the limits allowed by quantum theory and the probabilities given by it. [Technical note: This discussion ignores the effects of decoherence processes that occur before an observation (see Section 6.7). Decoherence theory is a many-worlds theory that, for our purposes, can be considered equivalent to the Copenhagen interpretation (see Section 6.8).]

Suppose two observers simultaneously look in a box in which the wavefunction still has not collapsed. Which observer collapses the wavefunction? It is the same paradox as that of two detectors and two observers in the Stern-Gerlach experiment described in Section 6.5. The only resolution is that the consciousness that collapses the wavefunction must be unitary and nonlocal (universal). This means that what appears to be individual consciousness is in reality universal consciousness. In other words, the consciousness that I think is mine is identical to the consciousness that you think is yours. This does not mean that the contents of my mind are the same as the contents of your mind. These are individual, and depend on our individual sensory mechanisms, brain structures, and conditioning.

In quantum theory, observation is not a continuous process, but is a rapid sequence of discrete snapshot-like observations. "Between" successive observations, there is only the wavefunction, in most cases a very complex one. This wavefunction includes not only the

external world, but also our body-minds. Change occurs only "between" observations, but remember that according to Goswami, the wavefunction "between" observations exists in the transcendental realm outside of time, so change actually occurs discontinuously in time. Only the wavefunction can change and it changes in accordance with quantum theory. [For example, human vision cannot discern more than about 20 different images/s, which corresponds to about 50 ms per image. Movies are filmed at 24 or 30 frames/s so that motion appears to be continuous instead of flickering. In classical Indian philosophy, the duration of one discrete observation is called a *kshana*, which is stated to be 1/4500 min or 1/75 s, see http://www.theosociety.org/pasadena/etgloss/ke-kz.htm).]

Exercise: Find a quiet place and close your eyes. Focus on your body sensations, particularly those in your hands or feet. See if you feel a tingling sensation in them. Do you think this is evidence that sensations are discrete rather than continuous? Now, with your eyes still closed, focus on your visual field. Do you see the tiny grainy fluctuations? Do you think these are evidence that sensations are discrete rather than continuous?

Question: When you see a slow motion scene in a movie, why does it seem to be continuous rather than flickering?

At the present time, most mainstream physicists think quantum theory can describe any physical object, including cats and our own bodies. In cosmology, even the entire early universe is thought to have been represented by a wavefunction. This is an enormous extrapolation from the most complex, but still relatively simple, objects that have been experimentally shown to obey quantum theory (see Section 4.2). Nevertheless, in this chapter we shall make the assumption that everything in the physical world is quantum mechanical. However, we must keep in mind that this assumption ignores the difficulties in interpreting quantum theory and in resolving its paradoxes, as discussed in Chapter 6..

7.3. The world in idealism

We now face the problem of understanding how the "external" world arises. If the universe is a wavefunction in the transcendental domain “until” the first conscious observation, and the transcendental domain is outside of space-time, then time itself does not exist until observations begin. Space-time, the observed universe, and the brain-sensory system are all manifested simultaneously. This does not occur “until” the wavefunction for a sufficiently complex brain-sensory system is present so that an aware, sentient being can be manifested simultaneously with the observation. Actually, this process is occurring constantly: Space-time, observing objects and observed objects are constantly and simultaneously being materialized by collapse of the wavefunction, see Figure 1.

Question: What is the evidence for the constant and simultaneous creation of space-time, observing objects, and observed objects? What is the evidence against it?

Nonlocal consciousness collapses the wavefunction. Space-time, perceived objects, and perceiving objects simultaneously appear. The external, perceived objects, many of which are also perceiving objects, form the external, objective, empirical reality. These objects are macroscopic and classical; therefore they have essentially no uncertainties in position and velocity. They appear to be stable because, while their wavefunctions change “between”

observations, in perceived time this happens slowly. Perceiving objects derive their self-consciousness and awareness from the nonlocal, universal consciousness that materializes them. We will see later how this happens.

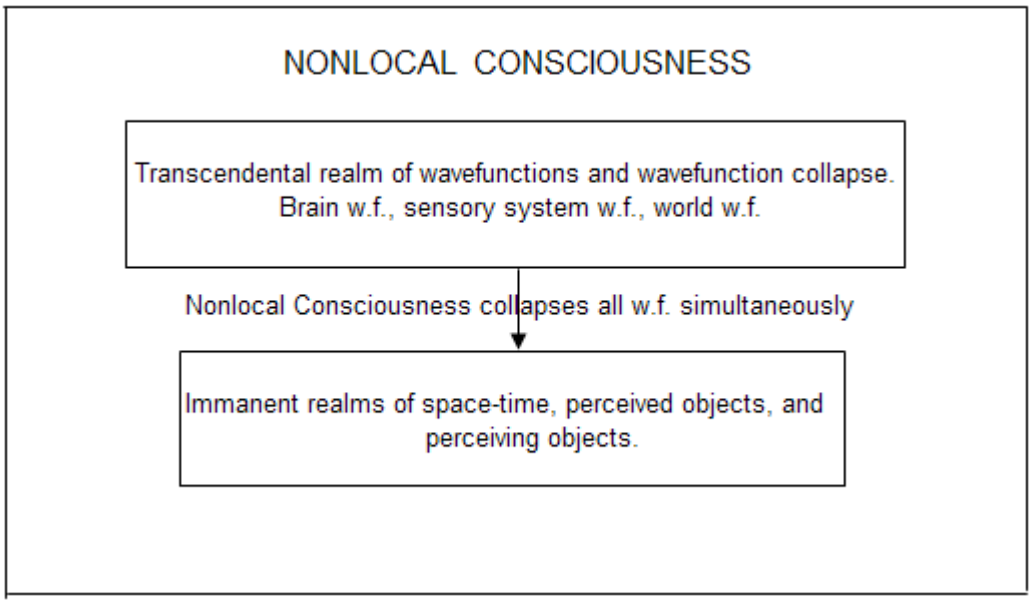
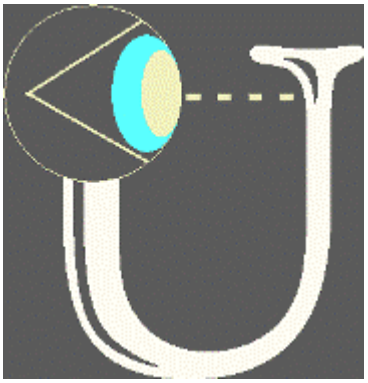


Figure 1. Manifestation of sentience by wavefunction collapse.



The universe creates itself by observing itself (J.A. Wheeler, 1975)

7.4. The quantum-classical brain

None of the traditional idealist philosophies explains how the personal "I" experience arises. This is such a persistent and compelling experience that it must be explained.

Goswami proposes a model of the brain-mind that has a quantum part and a classical part that are coupled together. In justifying the quantum part of the brain-mind, Goswami notes that the mind has several properties that are quantum-like:

> a) Uncertainty and complementarity. A thought has feature, which is instantaneous content, analogous to the position of a particle. It also has association, which is movement, analogous to the velocity (or momentum) of a particle. A thought occurs in the field of awareness, which is analogous to space.

Feature and association are complementary. If we concentrate on one and clearly identify it (small uncertainty), we tend to lose sight of the other (large uncertainty).

b) Discontinuity, or jumps. For example, in creative thinking, new concepts appear discontinuously.

c) Nonlocality. The correlations in the observations of different observers is a form of nonlocality (see Section 4.3).

d) Superposition. Psychological experiments by A.J. Marcel [*Conscious and preconscious recognition of polysemous words: locating the selective effect of prior verbal context*, in *Attention and Performance VIII (1980)*, (Ed., R.S. Nickerson)], too complicated to be discussed here, can be interpreted in terms of a model of the subject's brain which exists in a superposition of possibilities until the subject recognizes the object.

Exercise: Close your eyes and watch the thoughts come and go in your mind. First, concentrate on an image in the mind. Does concentrating on the image tend to fix it in place so that it doesn't disappear?
Now concentrate on the flow of thoughts without singling any one out. Does concentrating on the flow (the movement) tend to blur the features of the individual thoughts?

In Goswami's model, the brain, consisting of coupled quantum and classical parts, exists as a wavefunction in the transcendental domain (not in space-time) "until" wavefunction collapse materializes it. [Think of the Stern-Gerlach experiment or the Schrödinger cat paradox. "Prior" to collapse, the quantum states of the quantum part (the spin or the radioactive nucleus) are coupled to the classically separate states of the classical part ("on" or "off" of the spin detector, or dead or alive of the particle detector-cat combination) to form a quantum superposition in the transcendental domain.] Nonlocal consciousness collapses the wavefunction of the entire system into one of the states allowed by the classical part. The mind consists of the experiences of these collapsed physical states of the brain, not the states themselves.

The presence of the quantum part of the brain provides a large, possibly infinite, number of possibilities available to the classical part. (In our simple analogies, the only available possibilities were the spin-up and spin-down states in the Stern-Gerlach experiment, and the decay and no-decay states of the radioactive nucleus in the Schrödinger cat example.) All of the creativity and originality that the brain has comes from the quantum part, see Figure 2.

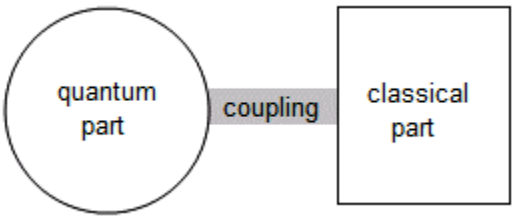


Figure 2. Quantum-classical model of the brain

Just as in our analogies, the presence of the classical part is necessary for collapse to occur and to provide the experienced final states. In our analogies, these final states were the observed states of detector-on or detector-off, and live-cat or dead-cat. Only the states of the classical part can be experienced by consciousness, exactly as in these analogies. These classical states must be distinct and nonoverlapping to correspond to our experience of only one distinct event at a time. They must also be memory states, which are states that are

irreversible in time (resulting in the experience of time moving forward), with wavefunctions that change only slowly so that persistent records of the collapsed events are made, leading to a sense of continuity in our experiences. The classical part functions completely deterministically just like any classical machine. The quantum states of the two parts of the brain are depicted in Figure 3.

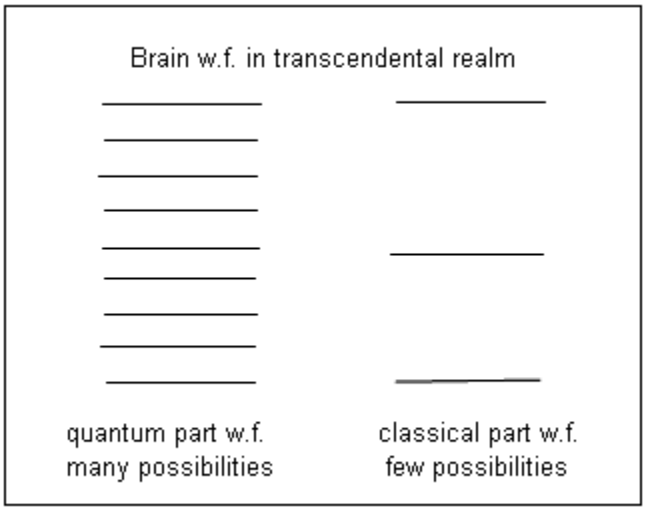


Figure 3. Quantum-classical states of the brain

Unitary, nonlocal consciousness chooses (see Section 7.9) the state to be experienced, but because the classical part is localized and isolated, the experience of the final brain states is local and individual. Although we are aware of the experience of an event, we are unaware of the choosing process that collapses the wavefunction that results in the event, i.e., the choice is made unconsciously. This is clearly so when we are passively observing passing events so that the time sequence appears to proceed on its own without our intervention. However, it is even true when we think we are making decisions (see Section 5.9).

Without a quantum part coupled to a classical part there would be no world of perceived objects. Both parts of the brain are necessary for wavefunction collapse to occur.

7.5. Paradoxes and tangled hierarchies

Normally, we identify only with the experiences associated with a particular brain-body. In order to explain how universal consciousness might identify with a such a physical object (the combined sensory mechanism-brain structure), Goswami utilizes the concept of a tangled hierarchy which he borrowed from the 1980 book by Douglas Hofstadter, *Gödel, Escher, and Bach: An Eternal Golden Braid*. He gave the following analogy in order to illustrate this concept.

> We first introduce the concept of logical types. An example of logical types is the following:
>
> 1. People who make statements
> 2. Statements

An item which defines the context for another item is of a higher logical type than that of the other item. In the example above, the first item identifies objects (people) that define the context for the second item (statements that people make). Thus, people are of a higher logical type than statements.

Next we define a self-referential system. An example is the following:

1. The following statement is true.
2. The preceding statement is true.

Both of these items are of the same logical type since they are both statements. However, they refer to each other, making the system self-referential. In addition, the statements reinforce each other, strengthening the validity of each.

Now consider a paradoxical system of items of the same logical type:

1. The following statement is true.
2. The preceding statement is false.

If the first statement is true, the second statement makes it false, etc., thus leading to an infinite series of opposite conclusions. This is a paradox. All logical paradoxes arise from self-referential systems, i.e., systems that refer to themselves rather than to something outside of themselves.

We can reformulate both the reinforcing and paradoxical systems as single statements:

3. This statement is true (reinforcing).
4. This statement is false (paradoxical infinite series).

Now consider the following self-referential system:

5. I am a liar.

Let us consider three alternative interpretations of this statement.

a) If the "I" is the statement itself, then this does not mix logical types and is equivalent to the paradoxical infinite series of statement number 4 above.

b) However, if I am the person that is making the statement, I am of a higher logical type (I am the context of) than the statement I am making. Now there need be no paradox because the statement does not refer to itself or to another statement of the same logical type, but to I, which is of a higher logical type. If the statement does not affect its context, there is no mixing of the level of the statement with the level of its context. Thus, we do not yet have a tangled hierarchy because the clear delineation between the two levels is maintained.

One can say that the infinite series of interpretation a) may be discontinuously terminated by a shift in the meaning of "I" in order to obtain interpretation b). In this way, the paradox is eliminated.

c) Now suppose I start to think about the statement, and I begin to take it seriously, perhaps even believing it. The statement is affecting its context, and it changes it. Assuming that I was not a liar initially, I could actually become a liar, which would be a radical change in the context. If I become a thoroughgoing, inveterate liar and cannot make a truthful statement, a paradox develops. If I never tell the truth, and I state that I am a liar, then I am not lying, etc. The two levels have become inextricably entangled in a paradoxical, tangled hierarchy.

Question: Has anybody ever told you that they were a liar? Was the self-contradiction obvious

to them?

In the brain-mind system, the brain consisting of quantum and classical parts is stimulated by an input from the physical sensory system, leading to a superposition in the transcendental domain of all the possibilities of the coupled quantum-classical brain. This quantum state continues "until" the wavefunction is collapsed by nonlocal consciousness. In the next three sections, we shall see how the level of the physical brain and the level of nonlocal consciousness might be mixed together to form a self-referential, paradoxical, tangled hierarchy, resulting in the experience of individual self-consciousness. This is analogous to interpretation c) of statement 5 above.

7.6. The first identification: The appearance of sentience

At the first collapse of the brain-sensory system wavefunction of the embryo or fetus, sentience appears, but without an observer/observed duality. (Exactly when this collapse occurs is unknown and consequently is an inadequacy of the theory.) Goswami explains this collapse as self-referential collapse between nonlocal consciousness and the brain wavefunction. Brain wavefunction and nonlocal consciousness mix with each other to make the collapse self-referential. Without self-referential collapse, there would be no sentience and no manifestation. The result is not only sentience but also entanglement of the level of nonlocal consciousness with the level of the physical system, a tangled hierarchy. This results in identification of nonlocal consciousness with the physical mechanism.

Question: In experiential terms, what is the evidence for the identification of nonlocal consciousness with the physical mechanism? What if there were no such identification?

According to Goswami, this tangled hierarchy is necessary for sentience to appear and for the life processes of the physical mechanism to occur. It also produces the experience of awareness: Nonlocal consciousness thereby becomes aware. We may call this state the unconditioned self. This is shown graphically in Figure 4:

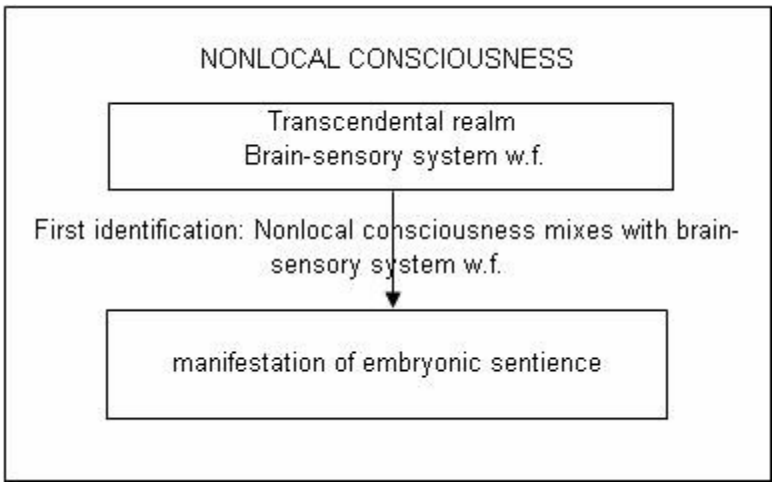


Figure 4. Diagram of the first identification

7.7. The second identification: The appearance of the "I"

The classical part records in its memory every experience (every collapse) in response to a sensory stimulus. If the same or similar stimulus is again presented to the brain, the memory of the previous stimulus is triggered, and this memory acts as a restimulus to the quantum part. The combined quantum-classical wavefunction is again collapsed and the new memory reinforces the old one. Repeated similar stimuli inevitably lead ultimately to an almost totally conditioned response, one in which the probability of a new, creative response approaches zero. The brain then behaves almost like a classical deterministic system. This is depicted in Figure 5:

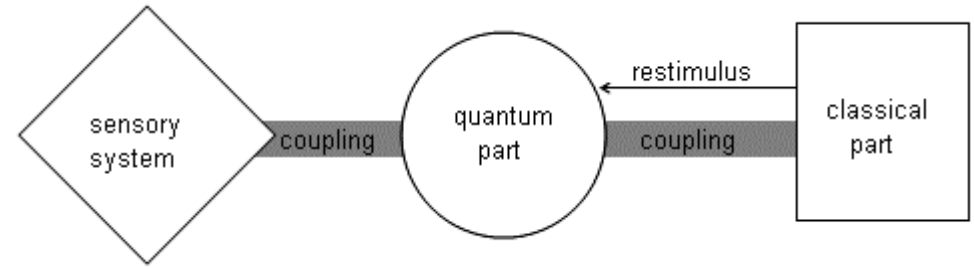


Figure 5. Model of the brain-sensory system

The repeated restimulation of the quantum part by the classical part results in a chain of secondary collapses. These secondary collapses correspond to the classical states of evoked memories, habitual reactions, introspective experiences, and conditioned motor responses. However, we can see evidence for the functioning of the quantum part even in introspection and memory because of the quantum characteristics of the mind that we discussed in Section 7.4 above.

The secondary processes and repeated running of the learned programs of the classical part conceal from us the essential role of nonlocal consciousness in collapsing the wavefunction and creating an experience. The result is the persistent thought of an entity (the "I"-concept) that resides in the mind. Now, a second tangled hierarchy can occur, this time between nonlocal consciousness and the "I"-concept, resulting in identification of nonlocal consciousness with the "I"-concept. When this occurs, the illusion of what we call the ego, “me” "I"-entity, or "I”-doer is formed. **The ego, or false self, is an assumed separate entity with an assumed power of agency that is associated with the classical, conditioned, deterministic part, while the unconditioned self is an experience that is dominated by the full range of possibilities of the quantum part.** The appearance of the ego is shown graphically in Figure 6:

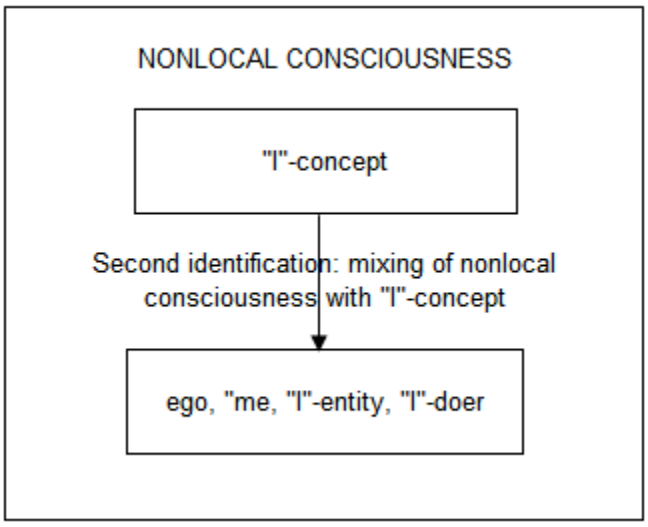


Figure 6. Diagram of the second identification

To recapitulate, two distinct levels of identification (tangled hierarchy) occur, the first resulting in pure awareness, the second resulting in the false self, ego, “me” or fictitious "I"-entity.

The ego does not exist as an entity. It is nothing but a presumption—the presumption that, if thinking, experiencing, or doing occur, there must be an entity that thinks, experiences, or does. It is the identification of nonlocal consciousness with the “I”-thought in the mind. As a result of this identification, the experience of freedom that is really a property of the unconditioned self becomes limited and is falsely attributed to the ego, resulting in the assumption that the “me” has free will instead of being a completely conditioned product of repeated experiences.

Exercise: Look and see if you can find the ego. What did you find?

If we believe that we are egos, we will believe that our consciousnesses are separate from other consciousnesses and that we have free will. However, at the same time, we will contradictorily perceive ourselves as being inside and subject to space-time and as the victim of our surroundings. The reality is that our true identity is the nonlocal, unitary, unlimited consciousness which transcends space-time, and the experience of our true identity is the infinitely free, unconditioned self.

7.8. Further discussion of the unconditioned self, the ego, and freedom

In this discussion, we must make a clear distinction between the two types of experience that are related to the two types of processes occurring in the brain. The first process to occur in response to a sensory stimulus is the establishment of a response wavefunction in the combined quantum-classical brain. This is a superposition of all possibilities of which the brain is capable in response to the stimulus. Nonlocal consciousness self-referentially collapses the wavefunction. Remember that in this first tangled hierarchy, the contextual level of nonlocal

consciousness and the level of the physical brain become inextricably mixed. This tangled hierarchy gives rise to awareness and perception, but still without the concept of an entity which perceives or observes. Goswami variously calls this primary awareness, pure awareness, the unconditioned self, or the Atman. It is important to realize that the unconditioned self is not an entity, thing or object. Pure experience needs no entity. In this state there is no experiencer and nothing experienced. There is only experiencing itself. This is the state of the unconditioned infant, and of the enlightened sage (a redundant term).

Question: Have you ever experienced pure Awareness? What is the contradiction in that question?

The other type of experience is related to the secondary processes in the brain. These are the processes in which the classical part restimulates the quantum part, and the combined quantum-classical wavefunction again collapses into the same or similar classical brain state, which restimulates the quantum part, etc. After sufficient conditioning of the classical part, the quantum-classical brain tends to respond in a deterministic pattern of habitual states. Included in these states is the concept of a separate entity. In the second tangled hierarchy, nonlocal consciousness identifies with this concept, and the assumed “me” or ego arises. When we are in this identified condition, we are normally unaware of both the tangled hierarchies and of the unconditioned self.

Identification that leads to the illusory “me” arises during early childhood when the child has been conditioned to think of itself as a separate person. This occurs after the child has been called repeatedly by its name; has been referred to as "you" (implying that there is another); has been instructed, "Do this!", "Don’t do that!"; and generally has been treated as being an independent person separate from its mother. However, one should not think that this conditioning process is something that can be avoided, since it is a necessary part of child development (see Section 5.8). The child is being conditioned for survival in the world.

The ego is presumed to be the thinker, chooser, and doer. However, it is absurd to think that a mere concept could actually be an agent with the power to think, choose, or do. The ego is nothing but a figment of the imagination, does not exist as an entity, and has no power whatsoever. In reality there is never a thinker, chooser, or doer. There is nothing but identification of nonlocal consciousness (which is not an entity) with the conditioned quantum-classical brain.

There is only one consciousness. Our consciousness is nonlocal consciousness. My consciousness is identical to your consciousness. Only the contents are different. The entities that we falsely think we are result from identification of this consciousness with a concept in the conditioned mind.

Identification with the hard conditioning and rigid isolation of the fictitious ego is relaxed in so-called transpersonal, or peak, experiences, which lead to a creative expansion of the self-image (described by Abraham Maslow in *The Farther Reaches of Human Nature (1971)*. These experiences approach, but are not identical to, those of the unconditioned self, since identification with a self-image is still present although the self-image becomes expanded.

The unconditioned self is experienced as pure awareness, pure presence, and pure

subjectivity in which there is no entity at all, and which arises when the unconditioned quantum wavefunction is first collapsed (or later in life after disidentification from the self-image has occurred). Awareness is what we really are, and is equivalent to the Atman of Indian philosophy, or not-self in Buddhism. The goal of all spiritual practice is to disidentify from the fictitious "me" and so to realize our true nature.

7.9. The disappearance of the ego. The experience of freedom from bondage

We are now in a position to complete our discussion of freedom. Goswami uses the term "choice" to mean the nonvolitional action of nonlocal consciousness in selecting a particular possibility out of the range of possibilities defined by the wavefunction. (Choice is nonvolitional because there is no entity to exert volitional choice.) Without identification, choice is free. With identification, choice becomes limited. However, even when we think we are egos, we are aware and we know that we are aware. Therefore identification of awareness with the I-concept is never actually complete, and this allows the possibility of disidentification from the false self.

We found in Sections 5.9, 5.10, 5.11, and 5.12 that freedom of choice does not exist in a separate entity. Therefore, even if the ego were real it would still not have the freedom to choose. However, because the ego is nothing but a fictional self-image, it does not even exist as an entity. Therefore its freedom is doubly fictitious. All choice is the nonvolitional choice of nonlocal consciousness, and complete freedom is the experience of unconditioned, disidentified awareness.

We come now to the paradox of the paradoxical tangled hierarchy (Section 7.5). The ego is the belief that it is free to choose, but it is not. The unconditioned self is freedom itself, but it is not a separate entity that can choose. Remember from Section 5.12 that the belief in free will depends on a perceived separation or dualism between a controller and a controlled. Within the unconditioned self there is no separation or isolation—there is no entity—so there is no dualism. Hence, in the state of pure, or primary, awareness, there is no illusion of free will.

The experience of true freedom comes from the unconditioned self, whereas what we think of as free will comes from the noncreative, conditioned, imaginary ego. Whenever we experience pure freedom, pure creativity, or pure originality, it is a result of a momentary disidentification from the conditioned ego, permitting the experience of the freedom of the unconditioned self to be revealed. This is true freedom, creativity, and originality, not the mechanical workings of the conditioned, deterministic brain. During these moments, there is no individual "I". When reidentification occurs, the conditioned "I" reappears and then takes credit for being free, creative, and original!

Questions: What is the experience of being absent? What is the experience of being present?

The paradox of the paradoxical tangled hierarchy reveals itself in our experience of freedom even when we are bound by our belief that we have free will. The thought of free will, which is a thought of bondage, cannot conceal our true nature, which is pure freedom. However, the ego attributes the experience of freedom to free will instead of to pure consciousness even though nothing in the conditioned mind is free.

How can we apply this knowledge to our personal lives? We have seen that our consciousness really is nonlocal universal consciousness and the goal of all spiritual practice is to know the freedom of unconditioned awareness. This can happen only when disidentification from the fictitious ego-entity has occurred. However, "you" as the ego cannot disidentify from the ego because the ego, being only a concept, can do nothing. Disidentification can only happen spontaneously. But understanding the ego and the feeling of bondage it entails are helpful in disidentification. The practices of Part 3 show this. However, "you" cannot do them. If they happen, they happen. If not, they don't (see also Section 5.15).

7.10. Critique of Goswami's model

Goswami's hypothesis of a quantum part of the brain is only a hypothesis, and it is presently not known whether a quantum part exists. This is not a fundamental problem because it is a hypothesis that eventually can be put to experimental test, and perhaps some day we shall know whether or not some kind of quantum part can be verified.

[Technical note: Every cell has a cytoskeletal structure consisting of microtobules. Some scientists (e.g., Roger Penrose, *Shadows of the Mind* (1994), Chapter 7) have speculated that these microtobules might support coherent quantum states, i.e., an entire microtubule might exist in a single quantum state instead of in the individual quantum states of its molecules. This coherence would be similar to that exhibited in the Bell-Aspect experiments (see Section 4.3). If so, the microtubules in the neurons of the brain might comprise the quantum part of the brain, whereas the classical part of the brain might consist of the classically functioning neural synapses. The quantum states of the microtubules would interact with the classical states of the neural synapses to form the coupling between the quantum and classical parts. The microtubules in other types of cells in the body might contribute to a lower level of cellular intelligence.]

The reason Goswami hypothesized a transcendental realm was to explain how wavefunction collapse could occur without violating Einstein locality. Goswami's model, however, contains a fundamental flaw. The transcendental realm is hypothesized to contain the wavefunction, yet the wavefunction as normally conceived is a function of time and space, which are absent in the transcendental realm and in fact do not appear "until" wavefunction collapse. A more general way of stating the same flaw is that concepts in quantum theory are usually conceived within the context of time and space, so it is in principle impossible to use such quantum concepts in a realm in which space-time is absent. Thus, the concepts of wavefunctions and wavefunction collapse in the transcendental realm are meaningless.

Goswami's transcendental realm is only one of several that have been conjectured (see Section 8.1). Goswami's model is useful in emphasizing the importance of identification and seeing how we are limited by it. In fact, knowing the exact mechanism for identification is not necessary for the validity or understanding of Parts 2 and 3 of this course. What is necessary is to see that identification is an ongoing process that is never complete, so it is always escapable, and therefore we are not forever doomed to suffer. Disidentification is possible at any time for any person (but the person cannot "do" it).

Nevertheless, because the existence of a transcendental realm, like the existence of any other objective reality, can never be proved, conceiving one is tantamount to sweeping the whole problem of the origin of the world under the rug so that it is out of sight, or to invoking an

unexplained and unexplainable god as creator, or to implicitly admitting the impossibility of an explanation. A much more elegant approach is to simply interpret the wavefunction as a concept in the mind (see Section 6.11) rather than existing in either a transcendental realm or in space-time. As a pure concept, there is no collapse to try to explain.

Chapter 8. Transcendental realms

8.1. Similarities between the different transcendental realms

So far, we have encountered two transcendental realms, that of Plato's cave allegory (see Section 1.4), and that of Goswami's quantum theory within monistic idealism (see Chapter 7). Now we shall consider three other transcendental realms, one by the sage Nisargadatta Maharaj, one by the sage Ramesh Balsekar, and one by Buddhism.

On p. 381 of *I Am That* (1984), Nisargadatta says,

> "The memory of the past unfulfilled desires traps energy, which manifests itself as a person. When its charge gets exhausted, the person dies. Unfulfilled desires are carried over into the next birth. Self-identification with body creates ever-fresh desires and there is no end to them unless this mechanism of bondage is clearly seen. It is clarity that is liberating, for you cannot abandon desire unless its causes and effects are clearly seen. I do not say that the same person is reborn. It dies, and dies for good. But its memories remain and their desires and fears. They supply the energy for a new person."

Nisargadatta's concept has been reformulated by one of his students, Ramesh Balsekar, whose teaching will receive much emphasis in this course. Ramesh uses a concept of the source and sink for the manifestation that is similar to the other transcendental realms. He calls it the "pool of consciousness" and it implicitly contains all of the forms from which consciousness "selects" the components for an object of manifestation such as a body-mind organism. On p. 78 of *Consciousness Writes* (1994), Ramesh says,

> "The future body's personality will be drawn from the totality of the universal consciousness, which is the collection of all of the "clouds of images" that keep on getting generated. This total collection gets distributed among new bodies as they are being created, with certain given characteristics which will produce precisely those actions which are necessary to the script of the divine playwright. No individual is concerned as an individual with any previous entity."

At the death of the organism, the mental conditioning that was present in the organism, such as thoughts, fears, desires, aversions, and ambitions, return to the pool where they become ingredients to be used by consciousness in creating new forms.

The Buddha taught a similar idea about rebirth. On p. 33 of *What the Buddha Taught* (1974), Walpola Rahula says,

> "What we call death is the total nonfunctioning of the physical body. Do all these forces and energies stop altogether with the nonfunctioning of the body? Buddhism says, 'No'.

> Will, volition, desire, thirst to exist, to continue, to become more and more, is a tremendous force that moves whole lives, whole existences, that even moves the whole world. This is the greatest force, the greatest energy in the whole world. According to Buddhism, this force does not stop with the nonfunctioning of the body, which is death; but it continues manifesting itself in another form, producing reexistence, which is called rebirth."

Nonlocality in time means that some nonlocal minds are sensitive to projections from the transcendental that include some aspects of past and/or future. This would explain those talented individuals that can read the "akashic records" and thus see past lives, or those that are precognitive and can see some aspects of the future. Nonlocality in space means that some nonlocal minds are sensitive to projections from the transcendental of images of locations far outside the direct perception of that individual. The inevitable inaccuracy and unreliability of such nonlocal projections can be explained by realizing that only part of the transcendental realm is projected.

Question: Do you know somebody who claims to be precognitive? Somebody who claims to be clairvoyant? Somebody who claims to remember past lives? Is there any way to verify that these claims are true?

We can now see the similarities between the different transcendental realms. All of them transcend space-time, but all are the source of space-time and of the entire manifestation. In each moment the entire manifestation arises and dissolves, to be replaced by the manifestation of the next moment. These processes of manifestation and dissolution go on continuously. (This process is directly observable by advanced Buddhist meditators, see Sections 14.5, 14.6, 24.2.)

None of the transcendental realms can be described or defined using space-time concepts because they are all transcendental to space-time. They are unperceivable to us but all contain the blueprints for the perceived manifestation. The material world is projected from the archetypal realm of Plato in our adaptation of the cave allegory, and appears by wavefunction collapse from Goswami's transcendental realm. It is manifested from leftover memories, desires, and fears in Nisargadatta's version, is selected by consciousness from Ramesh's pool of consciousness, and is reborn from unfulfilled desires according to Buddhism.

8.2. The meaning of the transcendental realms

The purpose of postulating a transcendental realm is to attempt to explain phenomena that have no other explanation. This is done in order to maintain some semblance of an objective reality, but the desperation in doing so is exposed by the fact that all transcendental realms are intrinsically unverifiable. In this they resemble the epicycles that Ptolemy invented in A.D. 140 in order to retain an earth-centered cosmology. The need to resort to such gimmicks conceals a fundamental defect that it would be better to reveal than to conceal.

We have come a long way from our discussion of objective reality and materialism in Sections 1.1 and 1.2. We have persisted in trying to find an objectively real explanation for all observable phenomena. In doing so we have seen that the concept of objective reality starts to become so unwieldy that it threatens to collapse under its own dead weight. The

transcendental realms can hardly be called objective since there is no agreement at all about their properties, existence, or even necessity. The inescapable progression of our thought from the material and tangible to the immaterial and incomprehensible strongly suggests that we are reaching the limits of science, and perhaps even breaching them (see also the discussion of this point in Section 6.10). It also strongly suggests that science is incapable of explaining everything, a possibility we already discussed in Section 5.6.

The transcendental realms were invented in an attempt to explain how the manifestation arises, but perhaps the real problem is our insistence on an objective reality in the first place. We question that assumption in Chapter 9.

Chapter 9. Perceiving and conceptualizing

9.1. A review of the physics

What does physics tell us about reality? In Section 1.1, we saw that the existence of any external, objective reality is unverifiable by direct sense impression. Furthermore, if the existence of an external, objective reality can never be verified by sense impression, it can have no effect on any sense impression. In Chapter 6, we saw that in most interpretations of quantum theory, the world is made up of a series of perceptions. We shall see in the next section that it is only because thought conceptualizes these perceptions into objects that they appear as objects to us.

In Chapter 6, we saw that our insistence on an external, objective reality forced us into the quandary of choosing the concept of wavefunction collapse, hidden variables, or many worlds. All of these interpretations are nonlocal. In Copenhagen theory, nonlocality results from nonlocal wavefunction collapse. In many-worlds theory, it results from nonlocal branching. In hidden-variables theory, it results from the nonlocal quantum force.

Hidden variables theory (Section 6.6) is the interpretation that is closest to classical theory because of the presence of classical particles and the absence of consciousness. However, it has a puzzling nonlocal quantum force for which there is no counterpart in classical theory. In many-worlds theory (Section 6.7), consciousness is assumed to cause branching, but how can it do that? In Copenhagen theory (Sections 6.3, 6.4, 6.5), consciousness causes wavefunction collapse, but how does that occur?

In Section 6.5 we saw that the Copenhagen interpretation requires consciousness to be universal as well as nonlocal. We can make the same argument about consciousness in the many-worlds interpretation (Section 6.8) because it causes nonlocal branching. Thus, in these interpretations, there can be no individual consciousnesses--there is only nonlocal universal consciousness.

In Sections 6.10, 6.11, we saw that we can avoid all problems of wavefunction collapse, branching, and nonlocality if we interpret quantum theory subjectively instead of objectively. In this interpretation, because there is no external, objective reality, everything that happens must happen only in the mind. The subjective interpretation is not only free from the problems of collapse, branching, and nonlocality, it is also remarkably similar to the teachings of Advaita and Mahayana Buddhism, which state the following: **There are no objects. There is only a**

series of perceptions. There is no perceiver. There is only nonlocal universal consciousness. (In Advaita, nonlocal universal consciousness is called pure Awareness. In Mahayana Buddhism, it is called primordial consciousness, or Buddha-nature.) It is remarkable that physics, which is ostensibly the science of external, objective reality, can tell us so much about subjective reality, and also can be in such agreement with our most profound nondualistic teachings.

In Chapter 7, we saw how Amit Goswami modeled the brain using a quantum part coupled to a classical part. In doing this, he hypothesized the appearance of an objective reality within the context of monistic idealism (an evident self-contradiction). In order to circumvent the nonphysicality of wavefunction collapse in space-time, Goswami's theory assumes that wavefunctions exist in a transcendental realm outside of space-time. But in Section 7.10 we saw that neither wavefunctions nor wavefunction collapse, both being defined in terms of space-time, can exist outside of space-time. Thus, Goswami unintentionally reveals the paradoxical nature of the very transcendental realm that he hypothesized to remove the paradox of wavefunction collapse in space-time! In addition, no transcendental realm or other form of external reality is directly verifiable, as we saw in Section 8.2. Nevertheless, the concept of identification, which Goswami attempted to explain, will be essential to our discussion of suffering as we continue in this course.

9.2. What is the perceived?

The Buddha taught that Life and movement are the same thing. On p. 26 of *What the Buddha Taught* (1959), Walpola Rahula says,

> "There is no unmoving mover behind the movement. It is only movement. It is not correct to say that life is moving, but life is movement itself. Life and movement are not two different things. In other words, there is no thinker behind the thought. Thought itself is the thinker. If you remove the thought, there is no thinker to be found."

We shall talk about two different types of processes. Perceiving is the simple appearance of movement in Consciousness. Movement in Consciousness is perceiving itself, and it has no separate parts. On the other hand, thinking, which is included in movement, is the appearance of thoughts. A thought seems to separate part of movement from another part while giving it a name. All thoughts are characterized by name and form, so thinking appears to fragment movement into separate thoughts. A good rule to remember is this: If it seems to be separate from something else, it is nothing but a concept.

All words are concepts, thus all spoken or written communication is conceptual. This entire course is conceptual but it points to what cannot be conceptualized. As an example, we shall distinguish between Consciousness in motion, or phenomenon, and Consciousness-at-rest, or Noumenon (discussed in the next section). These are not real distinctions because all distinctions are nothing but conceptualizations. Consciousness is always undivided.

As we may say that movement (a concept) in Consciousness (another concept) is an appearance (still another concept) in Consciousness, we may also say that the manifest (phenomenon) is an appearance in the Unmanifest (Noumenon). We can conceptualize further by using the terms, the manifest, the manifestation, phenomenality, and phenomenon almost interchangeably, with slight differences as determined by the context.

A concept can be "external", detected by one or more of the five "external" senses such as hearing or seeing, or "internal" like a thought, feeling, emotion, or sensation. In Section 1.1, we made a distinction between the concepts of "objective reality" and "subjective reality". We said that objective reality is external to, and independent of, the mind and can be observed and agreed upon by myself and at least one external observer. Subjective reality is that which exists only if it is observed. (We also said that certain mental phenomena can be considered to be objective if they can be verified by an external observer.

Question: Why is movement in Consciousness nothing but a concept?

Question: Why is a chair nothing but a concept? An animal? A person? The world? The universe?

Question: In what way is external reality nothing but a concept?

Question: Why is a thought nothing but a concept? A feeling? An emotion? A sensation?

Question: In what way is subjective reality nothing but a concept?

The concept of objective reality rests on the assumption, introduced in Section 1.1, that there exist observers who are external to me, and who can confirm my own observations. From childhood, we grew up without questioning this concept, so it seems very natural to us. But now we shall see that this so-called "objective reality" is no different in principle from "subjective reality" and is not reality at all, but is nothing but a concept. This may begin to make sense if we stop to consider that, not only is objective reality supposed to be external to, and independent of, the mind, but so also is the "external" observer whom I depend on to confirm my own observations of objective reality. However, the external observer who communicates with me is not in fact independent of the mind at all, but is part of subjective reality, i.e., is an image in the mind.

Reality is what is, without conceptualization. However, external reality is only a concept and cannot be proved. Even though it is useful for communication, for health, and for survival, it does not represent Reality, and therefore it will bring suffering if it is taken to be real. Suffering comes because external reality seems to be separate from me, which means that I seem to be separate from it. As long as I identify with a separate, objective me, I will be unable to realize my true nature and I will suffer.

Question: What are some specific ways in which the sense of separation from the “external” world leads to suffering?

Another problem with defining myself as an object is that all objects change in time, i.e., they are all temporal, so they all appear and disappear in time. Am I willing to accept that I am purely temporal? As we stated above, the concept of objective reality has physical survival value. But it has only passing physical survival value, because everything in "objective reality" comes and goes, and nothing in it survives.

Exercises: Close your eyes and see how perception is never the same from moment to moment.
Now, open your eyes and again see how perception is still never the same from moment to

moment.
Finally, see how the mind attempts to create a sense of permanence by forming the concept of separate, stable objects even though perception itself is impermanent.

We have defined "subjective reality" as that which exists only if it is observed, namely, thoughts, feelings, emotions, sensations, and perceptions. As discussed above, it is clear that there is no intrinsic difference between subjective reality and the objective reality that we have previously defined, since all "external" observers are only images in mind. "Objective reality" becomes nothing but an appearance or image in mind just as "subjective reality" is. All mental images come and go, and this is as true of the images of "objective" objects as it is of "subjective" objects.

Question: What are some specific ways in which any sense of separation at all leads to suffering?

Questions: Is there anything in your mind or body that you can be sure exists whether or not you are observing it? Is there anything in your mind or body that does not change? Is there anything in your mind or body that you can predict with certainty? Is there anything at all that you can be certain of?

The world in my mind is the only world that I can perceive directly. All bodies and other objects in this world are nothing but images in my mind. (The concept that there are no other minds than mine is a statement of solipsism, first proposed by the French philosopher, René Descartes, 1596 - 1650, see Section 4.3.) Therefore, if I accept the concept that other minds contain their own individual worlds, there are as many worlds as there are minds.

On page 96 of *The Wisdom of Nisargadatta* (1992) by Robert Powell, the sage Nisargadatta Maharaj says,

> "All exists in the mind; even the body is an integration in the mind of a vast number of sensory perceptions, each perception also a mental state ... Both mind and body are intermittent states. The sum total of these flashes creates the illusion of existence."

and on p. 201 of *I Am That* (1984), he says,

> "Learn to look without imagination, to listen without distortion: that is all. Stop attributing names and shapes to the essentially nameless and formless, realize that every mode of perception is subjective, that what is seen or heard, touched or smelt, felt or thought, expected or imagined, is in the mind and not in reality, and you will experience peace and freedom from fear."

There are no appearances, no universe, no enlightenment, no things and no absence of things, no space and no spacelessness, no time and no timelessness. No words can be used to describe Reality--not even the word Reality itself. All words are concepts, and all concepts depend on separating and naming. As soon as we give something--even nothing--a name, we have conceptualized it and have said too much. However, words can be very useful as pointers to Reality as long as we realize that the words are not Reality and cannot describe It. The finger pointing to the moon is not the moon. When we realize that Reality cannot be

described, we stop looking for It. Then we realize that there is no Reality and no absence of Reality--and even that is saying too much.

Question: Can an object exist in any way other than as the thought of it? If so, how would its existence be verified? How would we know whether something existed in the absence of a thought of it?

Exercise: Investigate whether *you* exist in any way other than as a thought. One way to do this is to examine everything that you think you are in the following way:
Am I a body? If so, can a body exist in any way other than as the thought of it? How would I know?
Am I a mind? If so, can a mind exist in any way other than as the thought of it? How would I know?
Am I a …..? etc.
In this way, investigate everything that you imagine yourself to be.

9.3. What is the perceiver?

(In this section we begin the convention of capitalizing all nouns that refer to noumenal or transcendental Reality, while referring to the phenomenal manifestation with lower case nouns, except where grammar requires capitalization.)

In the meditation for September 15 in *A Net of Jewels* (1996), Ramesh says,

> "What you appear to be is the outer body perceiving the outer world, but what you are is that Consciousness in which the body and the world appear."

In the meditation for October 13, he says,

> "Other than Consciousness nothing exists. Whatever you see is your own reflection. It is only through ignorance of your true nature that the universe appears to exist. One who understands with conviction that the universe is nothing but an illusion becomes free of it."

In the meditation for October 7, he says,

> "You are the primordial state of total freedom, that fullness of pure joy, that concentration of light which is subtler than the subtlest and the witness of everything."

On p. 528 of *I Am That* (1984), Nisargadatta Maharaj says,

> "The person is what I appear to be to other persons. To myself, I am the infinite expanse of consciousness in which innumerable persons emerge and disappear in endless succession."

Now we investigate more carefully what or who the "I" is that is perceiving. It may seem absurd to ask the question, "Who is perceiving this (whatever is being perceived)?", since the answer clearly seems to be, "I am." However, in the light of the previous section, we must be careful. Is the "I" that is perceiving separate from all other perceivers? If it is separate, then it must be

nothing but a conceptual object! All separate objects (that is, all objects) are conceptual. Any concept is the result of an intellectual process, and consequently, the separate "I" is only the result of an intellectual process. The most pervasive example of conceptualization is the concept of the individual, because the essential nature of the individual is its separation from everything else.

Question: How and when did your sense of separateness arise?

Without a separate "I", there is no perceiver or perceived, only perceiving; no experiencer or experienced, only experiencing. Experiencing is experience without the "I", which in turn is truth, love, beauty, and delight.

Perceiving implies the presence of an Awareness, without which there could be no perception. What is this Awareness?" This is the crucial question that we shall be investigating throughout this entire course. This Awareness is what is sometimes called the Self. However, calling it the Self is misleading, because it is not an object. It is what I really am, my true nature. It is Consciousness-at-rest, Noumenon, the Unmanifest, or pure Subjectivity. This means that it has no qualities or characteristics whatever. It cannot be perceived, conceptualized, objectified, or described. Because it is what I am, I cannot see it or imagine it. Thus, the terms we use are all pointers, not identifiers or descriptors.

We shall make a distinction between the concepts of pure Subjectivity (Noumenon) and pure objectivity (phenomenon), between the concepts of pure Awareness and its contents, and between the concepts of the Unmanifest and the manifest. Because separation is only a concept, the Unmanifest and the manifest are not really separate. Objects are not separate from the awareness of objects. Nevertheless, we will conceptually distinguish beween the Unmanifest, which is unchanging and cannot be conceptualized, and the manifest, which is constantly changing and can be conceptualized. There is no manifest without the Unmanifest, but the Unmanifest "always" is, whether or not the manifest appears. The deep sleep or anesthetized states are examples of the Unmanifest without the manifest. The dreaming and waking states are examples of the Unmanifest with the manifest (see Section 10.4 for more discussion). In later chapters, whenever we use the term Consciousness, we shall mean the Unmanifest and the manifest, or Awareness and the objects of Awareness, together.

The Ashtavakra Gita, an ancient Sanskrit scripture of 298 verses, is said by Ramesh to be the purest form of nondual teaching in Hindu literature. Verse 7.3 says (see http://www.realization.org/page/doc0/doc0004.htm),

> "It is in the infinite ocean of myself that the mind-creation called the world takes place. I am supremely peaceful and formless, and I remain as such."

Everybody can say the following: The only thing I know for certain is that I am aware. I, as Awareness, is the only Reality there is. I am not an object and am not separate. I am pure unmanifest Subjectivity, which is beyond all conceptualization. All else is conceptual and subject to change and loss. Whatever changes cannot be Me because I am changeless. I am not in the world; the world is in Me. I am not in space and time, they are in Me because they are nothing but concepts. There is nothing outside of Awareness so there is nothing outside of Me.

Exercise: What is it that is aware of Awareness? Is it a thought or feeling, or neither? Can it be present without thoughts or feelings? Can thoughts or feelings be present without it? Now look around you and see whether "external" objects can exist without your awareness of them. If they cannot, what does that imply about these objects? What does that imply about you?

Eventually, You will see that there is no difference between Awareness and the contents of Awareness, between pure Subjectivity and pure objectivity, or between Noumenon and phenomenon. That is why You are everything and everything is You.

The Awareness of every mind is the same Awareness. If it were not, there could be no communication between minds. The Awareness that You are is the Awareness that the sage is. The world of the sage is as local and as individual as the world of the ordinary person. However, in the sage, Awareness is not identified with the I-concept as it is in the ordinary person (see Sections 7.6, 7.7, 7.8, 7.9, and 11.3).

Verse 15.5 of the *Ashtavakra Gita* (see http://www.realization.org/page/doc0/doc0004.htm) says,

> "Desire and anger are objects of the mind, but the mind is not yours, nor ever has been. You are choiceless awareness itself and unchanging -- so live happily."

When Awareness identifies with the "I"-concept, the illusory "me" results. Whenever such a presumed, separate "me" appears, suffering inevitably results. Without this identification, there is no suffering because there is no individual to suffer. That is why suffering can disappear only when identification with the "I"-concept ceases. One example of suffering is the desire/fear experienced whenever a presumed, separate "me" clings to, or is attached to, other perceived objects, whether these objects are "external" physical objects, or "internal" thoughts, feelings, emotions, or sensations (see Section 21.3). Another example is the opposite of clinging and attachment, namely resistance and aversion to something whether it is "internal" or "external".

Question: Why is attachment suffering? Why is aversion suffering?

Question: What is suffering? Give specific examples.

Disidentification happens when the viewpoint shifts from that of the individual to that of impersonal Awareness. This can follow spiritual practice in one or more of its many forms, or it can be a sudden spontaneous event that occurs without prior practice.

9.4. Many minds, one Awareness

We saw in Section 9.1 that the objective interpretations of quantum theory have the problems of nonlocality, collapse, or branching, and that only the subjective interpretation avoids these problems. In Section 9.2, we saw that the only world that I can perceive is the one in my own mind. Consequently, no external, objective reality is either observable or problem-free. Hence, I am forced to conclude that my world is completely subjective.

However, if my world is completely subjective, then even I am completely subjective. Consequently, I cannot be an entity that perceives or that does anything else (see Sections

11.4, 11.5) because any entity must be an object, i.e., it must be perceivable by either me or some other observer.

In this philosophy, we might agree that the objects in my mind sometimes appear also in your mind (Section 6.5). However, you see the objects from a different perspective from mine. For example, both your body and mine might appear in your mind as well as in mine but the images in my mind are different from those in yours, so the bodies are different. However, while our minds are necessarily individual, Awareness is universal, and neither You nor I am a mind because our true identity is the Awareness that is aware of all minds.

Within this concept, suffering can only occur if "I" perceive anything to be separate from "me" (see Section 9.2). If "I" perceive "you" to be separate from "me", "I" may feel that "you" are an object of attachment (clinging) or an object of aversion (resistance) to "me". Likewise, if "I" perceive "my" thoughts, feelings, and body sensations to be separate from "me", "I" may feel an attachment or an aversion to them. In either case, there is suffering. The only way this suffering will disappear is if the sense of separation, i.e., the concept of objectivity, disappears.

Exercise: Examine your own concept of suffering (not the concepts that you have been told or what you have read). Look at your own experiences of suffering according to your own concept of it. If you do experience suffering, is it a thought, feeling, emotion, body sensation, perception, or some combination of those? If it is any of those, would you change it if you could? If you do not have a concept of suffering, do you have any experiences at all that you would try to change or would rather not have? If you would not call those experiences suffering, what would you call them?

We can never directly perceive the world in any mind but our own (see Section 5.5). In this regard, our worlds are uniquely our own (see Section 9.2) because the world is nothing but a concept within each mind. Now we ask, if each mind contains its own world, how is it that our minds are able to communicate with each other? Why is not separation total and absolute?

In Section 5.2 we introduced the concept of nonlocal mind (without relating it to nonlocal Awareness). In the Copenhagen interpretation (Section 6.5), we saw that the Awareness of all observers is the same Awareness (in Section 6.5, we called it nonlocal Consciousness). If Awareness were not nonlocal, in the absence of an objective reality two minds could not communicate with each other about the same object (e.g., a "table" or a "body"). Communication between individual minds requires a common element that connects the minds together. In the Copenhagen interpretation, this common element is nonlocal Awareness (see Sections 4.3, 5.2, 12.1, 12.2, Chapter 16). [In classical physics, it is the classical fields that connect objects together (see Section 2.6).]

Nonlocal communication between minds may be experienced directly as an interpersonal connection which transcends verbal communication (see Sections 5.2, 5.6). This is most clear whenever ego conflicts between minds are not so strong that they obscure the nonlocal connection. Such connections are clearest in many parental and filial relationships, sibling relationships, close personal relationships, support groups, therapy groups, and meditation groups (see Chapter 16).

Questions: What direct experiences can you cite as evidence that other minds exist? If there is more than one mind, why do you think Consciousness has manifested as more than one? Why not just one?

9.5. Objectification, the body-mind organism, and the primacy of the concept of memory

As we have seen, all objects, including the body-mind organism, stem from concepts. (As we shall see in Section 11.4, objects appear when Awareness identifies with these concepts. We can call this process objectification.) The world in each mind can be conceptualized as simply a collection of thoughts, feelings, emotions, sensations, and perceptions. In this conceptualization, the body-mind organism consists of thoughts, feelings, emotions, sensations, and some of the perceptions, while the “external” world consists of the remainder of the perceptions. The focus of this course is to see that all objects, especially the individual "I", are fundamentally conceptual, although some objects appear deceptively persistent and solid.

The concept of memory leads to the apparent persistency of mental images (a concept). As we shall see in Section 12.1, the concept of memory is the basis for all experience (a concept), so memory is primary to all other concepts. (In Goswami's model of the brain, the classical part is responsible for memory; see Section 7.4.) Without the concept of memory, there can be no concept of change, so there can be no other concepts, no experiences, no individual "I", no body-mind organism, and no world. In particular, because we can never directly experience any objective past or future, it is clear that they also can only be concepts.

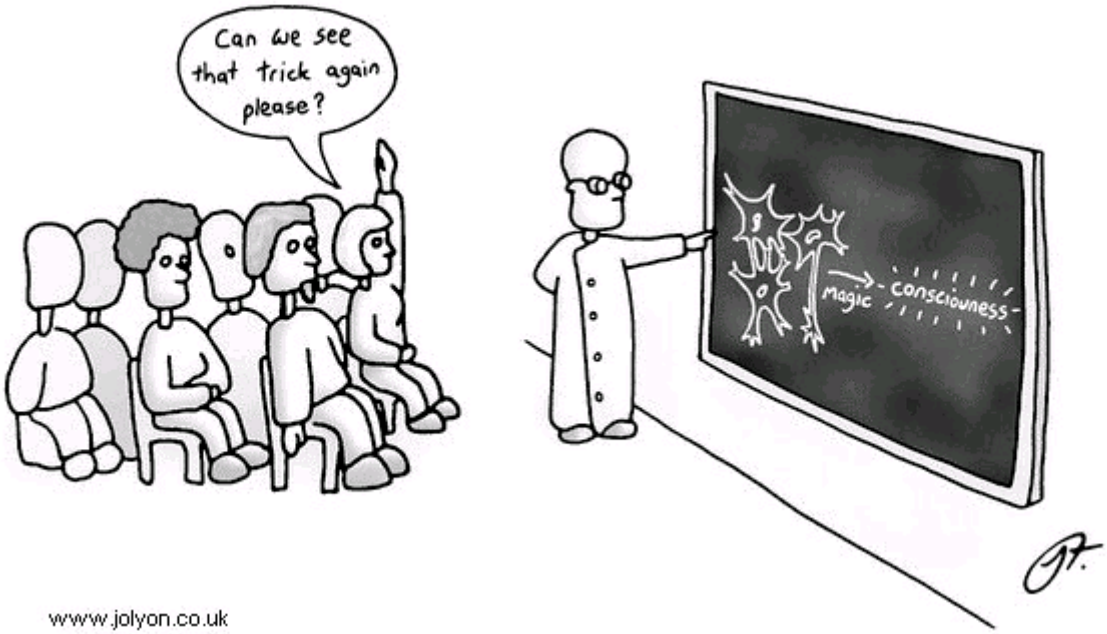
On page 71 of *The Wisdom of Sri Nisargadatta* (1992) by Robert Powell, Nisargadatta says:

> "In the great mirror of consciousness, images arise and disappear, and only memory is material--destructible, perishable, transient. On such flimsy foundations we build a sense of personal existence--vague, intermittent, dreamlike. This vague persuasion: "I am so and so" obscures the changeless state of pure awareness and makes us believe that we are born to suffer and to die."

9.6. The "hard problem" in consciousness science

Because most scientists of all types are mentally wedded to a belief in an external reality, they are unable to see an alternative picture. In particular, they are unable to see that Consciousness, rather than external reality, is the fundamental Reality. Thus, they persist in attempting (and in failing) to create an objective theory of Consciousness. When the contents of Awareness try to objectify Awareness, it is like a puppet trying to "puppetize" the puppet master (see Section 13.3), a picture on a movie screen trying to "pictureize" the actors (see Section 13.2), a shadow striving to "shadowize" the object that is casting it (see Section 13.4), or humans trying to "humanize" God.

The problem of trying to create an objective theory of subjective experience has been labeled the "hard problem" of consciousness by David Chalmers (see *Scientific American*, Dec. 1995, p. 80; and http://www.u.arizona.edu/~chalmers/papers/facing.html). (The so-called "easy problem" is to explain the functioning of the brain in terms of objective concepts.) In fact, there is no hard problem for those who are aware that they are aware.



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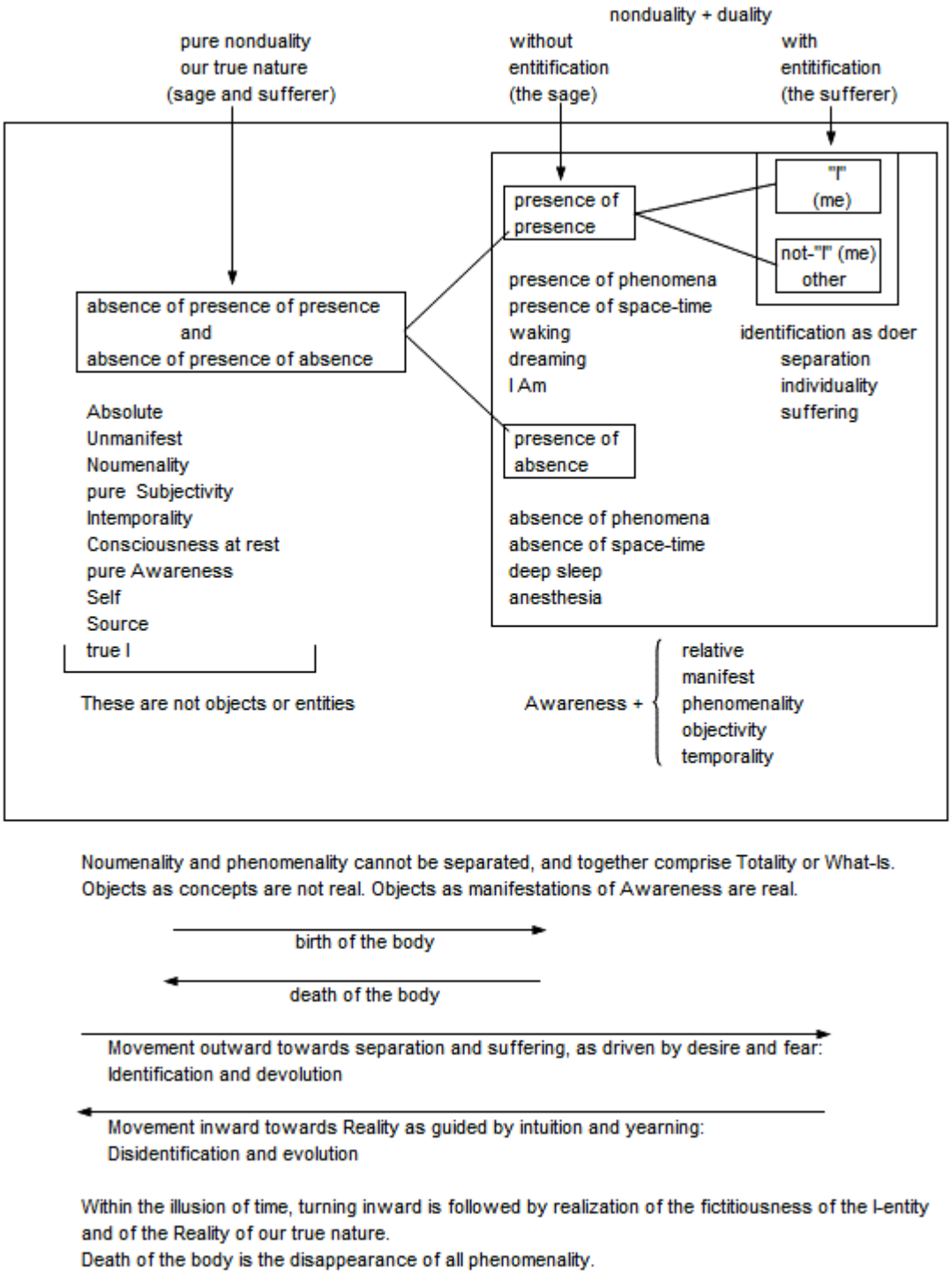
Chapter 10. The teaching of nonduality

10.1. The metaphysics of nonduality

By now you may be getting the impression that we will be questioning the reality of all objects in this course, and if you are, you will be correct. No object will be excluded from this examination because until you understand that no object is real, and all are conceptual, you will not be free.

The statement of nonduality is that Consciousness is all there is. Advaita, the Sanskrit word for nonduality, means absence of both duality and nonduality. There is neither duality nor nonduality in Consciousness, since both are nothing but concepts. This means that Consciousness cannot be objectified---rather, it is transcendent to all objectification. Consciousness includes all existence, all absence of existence, and all that transcends both existence and non-existence. Even though it cannot be described, we attempt to represent it by the structure shown below.

Figure 1



Although concepts themselves are unreal, we use them in order to point to what is real. For example, the structure in the figure above is conceptual only, not real, because, in fact, there is no separation of any kind. All separation is conceptual, thus, all objects are conceptual. Since no object is real, no object exists. In fact, existence itself is only a concept (see more discussion of this in Section 11.2). In nonduality, there is only Consciousness and there is nothing but Consciousness (see Section 9.3). There are no separate individuals and there is

no separate "I" (this also means that there is no separate soul).

In Buddhism, the concept of no-self (see http://web.ukonline.co.uk/buddhism/nynatlo1.htm) is equivalent to the concept in Advaita of no separate "I". The Buddha taught practices for seeing directly that there is no self (see Section 24.2). In Advaita, the analogous direct practice is inquiry into the self (see Sections 10.2, 23.2).

The illusion of separation (Maya, see Section 12.7) is the illusion that the world and all of its objects and individuals are separate from us. In nonduality, since there is no separate "I", there is no ability, volition, or freedom to think, feel or act separately. Everything that happens, including all of the thoughts, feelings, emotions, sensations, perceptions, and actions of the "individual", happens completely impersonally and spontaneously (causelessly). Indeed, the manifestation itself, including the illusion of causation (see Section 12.3), appears completely spontaneously.

In the meditation for September 12 in *A Net of Jewels* (1996), Ramesh Balsekar says,

> "We are neither different nor separate from Consciousness, and for that very reason we cannot 'apprehend' it. Nor can we 'integrate' with it because we have never been other than it. Consciousness can never be understood in relative terms. Therefore, there is nothing to be 'done' about it. All is Consciousness and we are That."

In the meditation for September 24, he says,

> "We neither exist nor not exist. Our true nature is neither presence nor absence but the annihilation of both."

In the meditation for June 15, he says,

> "When personal identification vanishes, all that then remains is a sense of presence without the person, which gets translated into a feeling of life as total freedom."

In the meditation for July 9, he says,

> "There is only one state. When corrupted and tainted by self-identification, it is known as an individual. When merely tinted by the sense of presence, of animated consciousness, it is the impersonal witnessing. When it remains in its pristine purity, untainted and untinted in primal repose, it is the Absolute."

In the meditation for September 23, he says,

> "It is impossible to describe the sense of magnificence that comes out of the true apperception of the nature of the individual in relation to the manifestation. The loss of personal individuality is exchanged for the gain of Totality of the cosmos."

On p. 179 of *I Am That* (1984), Nisargadatta Maharaj says,

> "[The sage] is happy and fully aware that happiness is his very nature and that he need not do anything, nor strive for anything to secure it. It follows him, more real than the

> body, nearer than the mind itself. You imagine that without cause there can be no happiness. To me dependence on anything for happiness is utter misery. Pleasure and pain have causes, while my state is my own, totally uncaused, independent, unassailable."

On p. 486, he says,

> "True happiness is uncaused and this cannot disappear for lack of stimulation. It is not the opposite of sorrow, it includes all sorrow and suffering."

Spiritual ignorance is the result of Consciousness identifying with the concept of a separate "I" (see Sections 5.12, 7.6, 7.7, 7.8 and 11.4), resulting in an illusory “me” which is separate from all other objects and entities, and which is erroneously accompanied by the belief that it has the power to do, think, and choose. Self-realization, awakening, enlightenment, and disidentification are terms applied to the disappearance of this sense of personal doership simultaneously with the realization that there is nothing but Consciousness. Awakening is experienced as absolute, total, and timeless freedom and peace, either with or without activity. Simultaneously there is the deep intuitive conviction that our true nature is pure unmanifest Awareness, pure Subjectivity, and that it transcends and underlies all phenomena. Because of this, it is without limits. Other terms that we shall use for pure Awareness are the Self, Noumenality, and Reality. Reality is not something that can be conceptualized or described, but it can be pointed to. Enlightenment, or awakening, is the natural result of spiritual evolution.

In the meditation for April 17 in *A Net of Jewels* (1996), Ramesh Balsekar says,

> "The beginning of inner transformation is a deep feeling of utter dissatisfaction with life, otherwise called dispassion. This is the point of the inward turning of personal consciousness. It is the point of no return in the quest for life's source."

Before enlightenment, the movement outwards towards the world and separation is driven by desire, fear, and suffering, while the movement inwards towards Reality is driven by intuition, apperception (nondual awareness), decreasing attachment to the external, and the urge to know one’s true nature. It is accompanied by an increasing sense of freedom, wholeness, and peace. These are not true movements because there is no place to go, for Consciousness is always What-We-Are, but initially they may be experienced as movement. The perception that we are separate and we are what is perceiving, doing, thinking, feeling, and acting is a movement outward, while understanding and inner awareness are movements inward. Before enlightenment, the inward and outward movements alternate with each other because neither can be sustained indefinitely by itself. Whereas phenomenal events occur in time and appear to obey the law of causality; awakening, or enlightenment, obeys no laws of phenomenality and therefore it occurs from outside of time and cannot be predicted, achieved, attained, or provoked.

10.2. The practices

None of the concepts in the teaching of nonduality are mere dogma. They are all empirically verifiable. For example, the absence of free will, or volition, has been confirmed scientifically (Sections 5.9, 5.10) and logically (Section 5.11), and can be verified simply by watching the

mind, and seeing that all thoughts, without exception, appear out of nowhere (Section 5.13). Thus, the thought that "I" shall decide one way or another also appears out of nowhere, and therefore is not an act of free will. Likewise, whenever intention arises, it also appears out of nowhere and is not a result of free will. The absence of an individual thinker is verified by asking, "Who is it that is thinking this?" or, "Who is the "I" that is thinking this?", then looking for the thinker, which cannot be found. Similarly, the absence of the doer is verified by asking, "Who is it that is doing this?" or, "Who is the "I" that is doing this?", and looking for the doer, which also cannot be found. Now if we ask, "Who is it that is looking?", the observer cannot be found either. These are examples of the practice of inquiry, which we have used and shall continue to use extensively throughout this course.

Try the following exercises in self-inquiry, then describe your experiences. They are best done when you are alone and quiet.
1) Ask, Who is it that is thinking this? Then see if you can see the thinker.
2) Ask, Who is it that is doing this? Then see if you can see the doer.
3) Ask, Who is it that is observing this? Then see if you can see the observer.

Question: Is there anything we can do to awaken?

The practices just described give confidence in the teaching. To advance the inward movement towards enlightenment, one can inquire further by asking, "What is it that is aware of all of this?" Asking such questions and looking inward in this manner allows us to begin to sense that we are not really individuals, but in fact are unmanifest, impersonal Awareness, which is not an object so it cannot be seen. The way to know what we are is to see what we are not. We are pure Awareness in which the body-mind organism, and indeed the entire universe, appears and disappears. Because the disappearance of the phenomenal self is not the extinction of pure Awareness (see Figure 1), there is no reason to fear it.

The practices described above are called inquiry and are discussed in greater detail in Chapter 23. They really include two practices: Self-inquiry (capitalized) is inquiry into our true nature, while self-inquiry (uncapitalized) is inquiry into the ego or “me”. They are variants of the basic practice, which is to ask, “Who/what am I (really)?” This seemingly simple practice is actually extremely profound because it expresses the only true purpose in anybody’s life. All seeking for happiness, satisfaction, or fulfillment is merely a distortion of this one purpose of realizing our true nature. Whether we realize it or not, we who think we are individuals are all seeking to find our Source, which is our true Self. Inquiry stops the mind and turns it towards Source, which seems to be inward, but which is really all there is. Inquiry is emphasized in the teachings of sages who consider themselves to be disciples of Ramana Maharshi.

Question: Who or what is it that practices? Look and see!

Question: What is it that is aware? Look inward and see!

An alternative approach to Reality is not really a practice, but rather is the increasingly deep intuitive understanding (discussed further in Chapters 20, 23) of the absence of the individual doer. Spiritual understanding arises as we see that all functioning of the manifestation happens completely spontaneously and impersonally. We see that the concept of doership (including thinkership, feelership, and observership) is equivalent to the concept of the individual, and this is the source of all bondage and suffering.

The deeper the intuitive understanding, the clearer it is that the individual is and always has been nothing but an illusion. This is equivalent to seeing that there is no doer and there never has been a doer. Total acceptance of this means the disappearance of all envy, jealousy, regret, guilt, shame, blame, and hatred, and is equivalent to surrendering to the functioning of Totality. This understanding is emphasized in the teaching of Ramesh Balsekar and his enlightened disciples.

Question: What would it be like to feel no envy, jealousy, regret, guilt, shame, blame, or hatred?

Ramana Maharshi (1879 - 1950), considered by many to be the greatest Indian saint of the twentieth century, taught that inquiry and surrender (see Section 19.1) are the only practices that lead to awakening (see, e.g., *The Teachings of Ramana Maharshi*, edited by Arthur Osborne, 1962). Nisargadatta Maharaj (1897 - 1981), Ramesh Balsekar (1917 - 2009), and Wei Wu Wei (- late 70s) all stress understanding (see Chapter 20), which is really a form of inquiry (see Chapter 23). All other practices must eventually reduce to these at some time or other if understanding is to deepen further.

10.3. The paths

In the meditation for October 18 in *A Net of Jewels* (1996), Ramesh Balsekar says:

> "Though in itself limited, a developed intellect is nonetheless necessary as the one faculty that can bring us to the brink of true Advaitic understanding. The person with a keen intellect becomes enlightened even when the instruction of the guru is imparted casually, whereas without it the immature seeker continues to remain confused even after a lifetime of seeking."
>
> "A mature and penetrating intellect will not have divorced itself from intuition and bound itself so extensively in logic and reason as to obstruct its natural receptivity to the spontaneous arising of divinity."

Inquiry and understanding comprise the spiritual path known as jnana yoga, the path of understanding (a sage of jnana is called a jnani). It is one of four classical Hindu spiritual paths (see, e.g., the online translation of the *Bhagavad Gita* at http://www.bhagavad-gita.us/articles/660/1/Introduction-to-Bhagavad-Gita/). The other three are karma yoga, or selfless service; bhakti yoga, or devotional surrender (the devotee is called a bhakta); and raja yoga, or discovering our true nature through meditation and contemplation. Raja yoga is often practiced concurrently with the other three. Jnana, karma, and bhakti yoga each tend to attract a specific kind of personality. Bhaktas are usually "feelers", karma yogis are usually "doers", and jnanis are usually "thinkers". In general, we can say that there are far more bhaktas than jnanis or karma yogis, and there are far fewer jnanis than bhaktas or karma yogis. However, there is much overlap among all of the paths, and no person ever exclusively follows one or the other. Jnana is particularly well suited for academic study because of its emphasis on the intellect. However, intellectual understanding is only the first step, and, indeed, it can become a hindrance later when it must be succeeded by intuitive understanding and surrender to pure Awareness.

Question: If you were to classify yourself according to a spiritual path, would it be jnana yoga, karma yoga, or bhakti yoga?

Buddhism has the Noble Eightfold Path, consisting of the following eight observances (from *What the Buddha Taught* (1974) by Walpola Rahula) (see also Section 14.5 and http://www.thebigview.com/buddhism/eightfoldpath.html):

> Ethical conduct, consisting of 1) right speech, 2) right action, and 3) right livelihood.
> Mental discipline, consisting of 1) right effort, 2) right mindfulness, and 3) right concentration.
> Wisdom, consisting of 1) right thought, and 2) right understanding.

Many volumes have been written on these observances. Right mindfulness is the basis of a path called insight meditation (see Section 14.6 and http://www.enabling.org/ia/vipassana/Archive/A/Amaravati/introInsightMeditation.html). The Buddhist path has nothing to do with belief, prayer, worship, or ceremony. It leads to freedom, happiness, and peace through morality, concentration, and wisdom.

The Noble Eightfold Path is not to be considered as rules for behavior or even as rules for spiritual practice. Rather, they are investigations into the underlying meaning of the Buddha's teachings.

The path of prayer is the principal path of Christianity. Three Trappist monks at St. Benedict's Monastery in Snowmass, CO (http://www.centeringprayer.com/) have recently developed two forms of prayer called Centering Prayer and Contemplative Prayer that are intended to bring the soul into union with God. These are based on the 14th century anonymous book, *The Cloud of Unknowing*. When union happens, the soul disappears and only God remains (this is similar to the yogic state of nirvikalpa samadhi, see Section 23.6).

10.4. About death

Because all bodies die, if we identify with the body, we will fear death. When we see that we are not the body, we will be indifferent to death. In Chapters 20 and 23, we shall see directly that we are Awareness, which is unchanging and cannot die. We are not what changes, which is unreal and which must die.

All sages attempt to answer the seekers' questions, "What was 'I' before the birth of the body?", and, "What will 'I' be after the body dies?" Ramesh Balsekar teaches that, when the body dies, Consciousness simply disidentifies from it. Indeed, the death of the body is the result of Consciousness disidentifying from it. Since there was no separate “I” before death, there is none after death, so there is no entity to continue after death. Thus, there is neither an after-death nor a before-death state for the “I” since it has never existed in the first place. Without a body there is only pure unmanifest Consciousness.

In the meditation for April 13 in *A Net of Jewels* (1996), Ramesh says,

> "Once the body dies, manifested consciousness is released and merges with the impersonal Consciousness like a drop of water merges with the ocean. No individual identity survives death."

In the meditation for May 20, he says,

> "When you are dead, you will be back in the primordial state of rest which existed before you were born, that stillness before all experience. It is only the false sense of a limited, separate "me" that deprives life of its meaning and gives death an ominous significance which it really does not have."

In the meditation for June 19, he says,

> "What is born must in due course die. The objective body will thereafter be dissolved and irrevocably annihilated. What was once a sentient being will be destroyed, never to be reborn. But the consciousness is not objective, not a thing at all. Therefore, consciousness is neither born nor dies, and certainly cannot be 'reborn'."

And in the meditation for October 14, he says,

> "Although one may be afraid of the process of dying, deep down one very definitely has the feeling, the intuitive conviction, that one cannot cease to exist. This feeling has been misrepresented as the basis for the theory of rebirth, but the fact of the matter is that there exists no actual entity to be either born or reborn or to cease to exist."

Since there never is a separate "I", there can be no entity either to incarnate or to reincarnate. Ramesh explains the existence of individual characteristics of the body-mind organism as a result of conditioning and heredity (see also Section 5.15). [Note: Ramesh says that heredity includes differences projected from the "pool" of consciousness (see Section 8.1) as well as genetic differences. (The "pool" is a concept that cannot be verified; see Section 8.2.) Ramesh uses this concept to try to explain the origin of body-minds that are strikingly similar to previous ones, as in the concept of reincarnation. From the "pool", he says the body-mind may have inherited characteristics from previous body-minds, but there is no previous lifetime of the "I" since there is no "I".]

Some sages teach that, in the absence of the body, Consciousness is still aware of itself. The evidence they cite is an awareness that they say exists during deep (dreamless) sleep. For example, in *I Am That* (1984), p. 28, the following dialogue ensues between Nisargadatta Maharaj and a questioner:

> Questioner: What do you do when asleep?
> Maharaj: I am aware of being asleep.
> Q: Is not sleep a state of unconsciousness?
> M: Yes, I am aware of being unconscious.
> Q: And when awake, or dreaming?
> M: I am aware of being awake or dreaming.
> Q: I do not catch you. What exactly do you mean? Let me make my terms clear: by being asleep I mean unconscious, by being awake I mean conscious, by dreaming I mean conscious of one's mind, but not of the surroundings.

> M: Well, it is about the same with me, Yet, there seems to be a difference. In each state you forget the other two, while to me, there is but one state of being, including and transcending the three mental states of waking, dreaming and sleeping.

In *Truth Love Beauty* (2006), Francis Lucille says,

> "Consciousness knows itself, with or without objects."

However, note that, in the February 4 meditation in *A Net of Jewels* (1996), Ramesh states,

> “The original state of the Noumenon is one where we do not even know of our beingness.”

This is the state before birth and after death. Since there is no body in this state, there is only Noumenon. This state is not identical with the states in dreamless sleep, under anesthesia, or while comatose, because, objectively speaking, in those states there is still rudimentary sentience associated with the brainstem. Dreamless sleep, anesthesia, and coma are examples of the presence of absence as depicted in Figure 1. These are not the same as death because, before the body was born and after it dies, there is a double absence--the absence of the presence of the manifestation and the absence of the absence of the manifestation. The only way to describe this state is that it is neither presence (waking) nor absence (sleep), neither existence nor nonexistence.

Question: What is the experience of dreamless sleep? Can you remember it? What is the experience of being under anesthesia? Can you remember it?

Although all religions attempt to give some picture of what we will be after death, they are all based on ego fears and desires rather than on personal experience. The ego may insist that it will continue to exist after the death of the body, but in so doing, it defies the direct evidence of everyone’s disappearance during deep sleep or anesthesia. If the reader cares to imagine some picture of personal life before birth and after death, he or she should be aware that there never can be any kind of direct proof of such states. Some people think that thought can exist without a body, so that the “I” concept (the soul) may prevail after the death of the body. But if that state cannot be verified, how can it be said to have existed at all?

Many Buddhist teachers claim that the Buddha taught that, after death, the individual is reborn in another body. To them, this seems logical because of the Buddha's teaching of karma (or causality, see Section 12.3). However, because he taught that there is no self, there hardly could be a rebirth of the self. In the words of the Buddha (see http://www.mahidol.ac.th/budsir/buddhism.htm):

> What is it, Venerable Sir, that will be reborn?
> A psycho-physical combination, O King, is the answer.
> But how, Venerable Sir? Is it the same psycho-physical combination as this present one?
> No, O King. But the present psycho-physical combination produces karmically wholesome and unwholesome volitional activities, and through such Karma a new psycho-physical combination will be reborn (*Milinda-Panha* 46).

After-death states, such as those described in the *Tibetan Book of the Dead*, by necessity are intuited or cognized by a living person, so the reliability and motives of that person must be considered. Any intense, personal experience, such as a near-death experience, cannot be proof because such experiences by definition and necessity are not death experiences. The appearance of discarnate entities, such as spiritual guides, deceased relatives, or religious figures, are also not proof because they always appear in living body-mind organisms and therefore could merely be mental phenomena.

Because near-death and out-of-body experiences require the presence of a brain, they cannot reflect what happens after death. In fact, out-of-body experiences can even be produced at will by electrically stimulating the right angular gyrus region of the brain [see Blanke, Ortigue, Landis, and Seeck, *Nature* 419 **(**2002) 269 - 270); and by video camera and 3D goggles (H. H. Ehrsson, *Science* 317 (2007)1048; and Lenggenhager, Tadi, Metzinger, and Blanke, *Science* 317 (2007) 1096-1099]. Near-death experiences have been shown to be more common in people for whom the boundaries between sleep and wakefulness are not as clearly defined as in those not having near-death experiences (see Kevin Nelson, *Neurology* 66 (2006) 1003). Thus, in near-death experiences, the REM (rapid eye movement) dream state of sleep can intrude into normal wakeful consciousness.

In the April 7 meditation of *A Net of Jewels* (1996), Ramesh says:

> “There are many reports of what are popularly considered ‘death-experiences’, which are mistaken as evidence of what happens after death. These are in fact only hallucinations experienced by the ego arising from stimulation of certain centers of the brain before, not after, the completion of the death process. Most of the mystical phenomena recorded as yogic experience are of the same order, movements in consciousness experienced by the ego. But when man finally surrenders his miserable egoic individuality, there is no experience of anything. He is the Totality itself.”

In the April 4 meditation of the same book, Ramesh says:

> “My relative absence is my absolute presence. The moment of death will be the moment of highest ecstasy, the last sensorial perception of the psychosomatic apparatus.”

On p. 181 of *I Am That* (1984), Nisargadatta (Ramesh's guru) says:

> "Everybody dies as he lives. I am not afraid of death, because I am not afraid of life. I live a happy life and shall die a happy death. Misery is to be born, not to die."

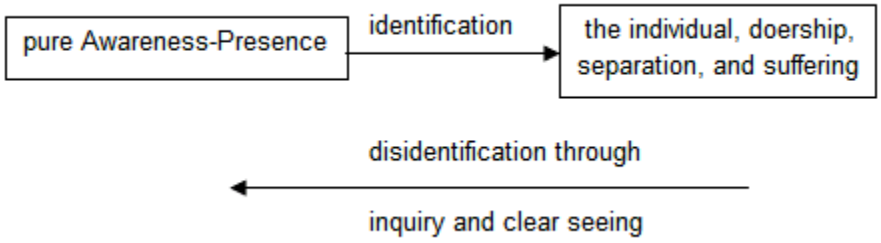
And on p. 122, he says:

> "To be a living being is not the ultimate state: there is something beyond, much more wonderful, which is neither being nor non-being, neither living nor non-living. It is a state of pure awareness, beyond the limitations of space and time. Once the illusion that the body-mind is oneself is abandoned, death loses its terror; it becomes a part of living."

Question: Does the thought of death frighten you or make you feel uneasy?

10.5. Summary diagram

When Figure 1 is stripped of all nonessential concepts, it becomes the following:



Chapter 11. The functioning of the mind

11.1. The nature of duality

In the meditation for May 21 in *A Net of Jewels* (1996), Ramesh says,

> "It must be constantly borne in mind while trying to understand the mechanics of the apparent process of manifestation that nothing has actually been created. All that appears is mind-stuff, that of which all dreams are made, and apart from Consciousness itself, nothing exists, neither the mind nor the senses nor their objects."

In the meditation for May 20, he says,

> "In one's natural, immediate attention or awareness there are no boundaries, no separate items of manifestation, unless and until thought intrudes and directs specific concentration on a particular thing. And this is what creates separation along with the whole chain of other thoughts and reactions that lead to every kind of conflict and unhappiness, which we then interpret as bondage. But the realization that boundaries are a product of thought is at once the realization that the separation caused by these boundaries and the conflicts that ensue are all an illusion."

In the meditation for October 29, he says,

> "The entire manifestation is purely conceptual. Nothing has actually ever been created, and nothing has ever been destroyed."

On p. 42 of *The Elements of Buddhism* (1990), John Snelling says,

> "A primary cause of suffering is delusion: our inability, because of subtly willful blindness, to see things the way they truly are but instead in a distorted way. The world is in fact a seamless and dynamic unity, a single living organism that is constantly undergoing change. Our minds, however, chop it up into separate, static bits and

> pieces, which we then try mentally and physically to manipulate. One of the mind's most dear creations is the idea of the person and, closest to home, of a very special person which each one of us calls I: a separate, enduring ego or self. There is "I"-- and there is all the rest. That means conflict--and pain, for "I" cannot control that fathomless vastness against which it is set. It will try, of course, as a flea might pit itself against an elephant, but it is a vain enterprise."

In this chapter, we shall depart from the trend of Chapters 9 and 10 by focusing our attention on the world instead of on what we really are. However, it will be helpful for the reader to keep in mind the lesson of those chapters, viz., that there is nothing but Consciousness. Everything else is a concept. But, in order to continue our course, we must attempt to conceptualize that which cannot be conceptualized.

In Section 8.2, we saw that the conventional concept of objective reality rests on shaky grounds. In Section 9.2, we saw that all separation between objects is purely conceptual because there is no separation within the wholeness of Consciousness. Likewise, we saw in Section 9.3 that the separation between pure Subjectivity (Awareness) and pure objectivity is also purely conceptual. These are examples of the way we shall use concepts to point to what is beyond concepts.

Since concepts are formed by splitting off one part of the whole from the rest, they invariably come in the form of polar pairs, that is, of pairs of inseparable opposites (e.g., “I” and not-“I”). A pair forms an indivisible whole. Thus, the two opposites must always appear together, and are conceived from what is inconceivable. Since wholeness appears to have been broken, nonduality appears to have been replaced by duality. However, this is only an appearance, a result of conceptualization, since Consciousness is always intrinsically whole.

The appearance of duality implies a boundary line between one part and its opposite. As we shall soon see, one of the inevitable consequences of any boundary line is its potential to become a battle line, with all of the suffering that it entails.

All polar pairs, or dualities, are only conceptualizations in mind, and come and go in mind without affecting Consciousness, just as a reflection can come and go without affecting its source. All conceptual phenomena are merely reflections of Consciousness in Consciousness (the metaphor of Section 13.9). They are the restless waves that appear on the silent sea (the metaphor of Section 13.4).

The yin/yang symbol of ancient Chinese philosophy (see, e.g., http://en.wikipedia.org/wiki/Yin_and_yang) shown below (except for the captions) is a striking representation of duality within nonduality. It graphically shows how nonduality (the outer circle) appears to be broken into the two polar opposites, yin (dark) and yang (light). Each part contains the seed (a small dot) of the other part, representing the ease with which yin/yang can change into yang/yin. The boundary line between the two represents potential conflict, while nonduality itself is never disturbed by any appearances within it. In Chinese philosophy, yin signifies the female (moon) principle, and yang signifies the male (sun) principle, but, more generally, they represent any pair of polar opposites.

Consciousness is All

All is Consciousness

11.2. The appearance of sentience within Consciousness

We have seen two objective explanations of how the world appears out of the transcendental: 1) wavefunction collapse, given in Section 7.3; and 2) manifestation from the transcendental realms of Nisargadatta and Ramesh, given in Section 8.1. Both concepts have the logical difficulties that are discussed in Section 8.2. A simpler, more general, and more verifiable concept is that the manifestation simply appears when sentience appears within Consciousness.

Sentience is the mechanism by which Consciousness becomes aware of Itself. (Objectively, sentience requires a brain connected to sensory organs; see Section 7.6.) There can be no manifestation without sentience, and there can be no sentience without manifestation.

In Chapter 9, we used the term individual mind, although we found that Awareness of all minds is universal, not individual. In simplest conceptual terms, all experience can be divided into thoughts, feelings (which are more subtle than emotions), emotions, sensations, and perceptions. All of these are nothing but concepts dividing Consciousness, so none is more real than another. However, we tend to equate intensity and persistence with reality, so the last items in the list can seem to be more real than the first items. For example, emotions, sensations, and perceptions can seem to be more real than feelings and thoughts because they can be more intense and persistent. However, sensations and perceptions are not inherently more real than feelings and thoughts are. On the contrary, the more attention-grabbing an object is, the more unreal it is likely to be, and the more subtle it is, the more real it is likely to be. For example, subtle feelings and thoughts (see Section 10.1, Chapter 16) are more likely to point to Reality than intense ones are, and very subtle perception (called apperception) is more likely to reveal the underlying Reality of the object (see Section 23.3 and Chapter 24) than superficial perception is.

On p. 95 of *I Am That* (1984), Nisargadatta Maharaj says,

> "What is beautiful? Whatever is perceived blissfully is beautiful. Bliss is the essence of beauty."

On p. 48-49 of his book *Eternity Now* (1996, see Appendix), the sage, Francis Lucille, says that Truth, Love, and Beauty transcend all concepts, and come directly from the Unmanifest

and are pointers to the Unmanifest. On p. 70, he says that positive feelings like love, happiness, gratitude, awe, respect, and sense of beauty come from beyond the mind, and they generate release, relief, and relaxation at the somatic level. These are to be contrasted with negative emotions, like anger, hatred, and fear, which come from the mind, and which generate stress, heaviness, pressure, constriction, and tension at the somatic level.

Exercise: Close your eyes and feel the following feelings:
Fear, anger, hatred.
Now feel the following feelings:
Love, gratitude, beauty.
What were your experiences? Where did you feel them? Which seemed more real?

11.3. Manifestation: The first level of identification

We shall talk about three levels of identification. The appearance of sentience and the manifestation is the first level of identification (see Section 7.6).

In the meditation for January 12 in *A Net of Jewels* (1996), Ramesh says,

> "The entire phenomenal manifestation is based on the principle of duality, which starts with the sense 'I AM'".

In the meditation for June 9, he says,

> "An infant, not being aware of having an individual identity, has no intellect with which to conceptualize and therefore lives in spontaneous freedom without resistance from moment to moment. The same is true of the self-realized sage, who has gone beyond the mind."

And in the meditation for April 10, he says,

> "The life of a sage appears to others to be as purposeless as the actions of an infant. The infant lives in the bliss of ignorance, while the self-realized sage lives in the bliss beyond both ignorance and knowledge. In fact the sage is no longer even an individual, in spite of the presence of a fully developed intellect."

At the first level of identification, which is the level of the infant, Consciousness is identified with the whole because the concept of separation has not yet arisen. Until intellect arises, there can be no concepts, so there can be no distinction made between subjectivity and objectivity. (This might also be the case with insects and the lower animals.) With the appearance of intellect in man and possibly the higher animals, the concepts of separation and duality appear. These concepts appear within nonduality, e.g., the concept of the individual mind (see Section 9.2) appears within Consciousness. The working mind now appears (see Section 11.9) but still with no sense of personal doership. This is the state of the sage. The difference between the sage and the infant is that the sage has a well-developed intellect whereas the infant does not.

Question: Does the manifestation (the first level of identification) occur only in the infant? Does it also exist in the adult on waking from deep sleep? If observations occur many times per second (see Sections 6.3, 6.4, 7.2), might it also occur at each observation?

In the sage, as distinct from ordinary people, there is no identification with the concepts of doership. However, in the sage as well as with ordinary people, there is identification with name and form. This means that there is direct awareness of the body's thoughts, feelings, emotions, sensations, and perceptions, but there is no direct awareness of those of any other body (see Section 9.2). Thus, when the sage says "I", he often refers to "his" body-mind but never to another body-mind. (At other times, when the sage says "I", he often refers to Consciousness.) Ramesh says that identification with name and form is exhibited when the sage is addressed and the body responds. In the *Advaita Fellowship News* of August 2003 (http://www.advaita.org), he says:

> "The really important thing to realize--there is no need to try to remember it--is that the fact that there is no individual doer does not mean that there is no doing, that there is inaction, but that the operation of doing happens in the form not of inaction but non-action. The ego--as identification with a name and form--will remain as long as the body remains, but after Self-realization, continues to function merely as a witness of the non-doing instead of as a doer."

[Note: In this passage, Ramesh uses the term "ego" to mean both identification with name and form after Self-realization, and identification with doership, name, and form before Self-realization. In this course, we shall use it only in the latter sense.]

Because the sage functions from pure Awareness, when the sage speaks, it comes directly from Source without being corrupted by a "me". However, what the sage says and the way it is said also depends on the conditioning of the body-mind organism, and this persists after the disappearance of the "me". That is why different sages will explain their experiences of nonduality in different terms.

11.4. Objectification: The second level of identification

In the meditation for July 31 in *A Net of Jewels* (1996), Ramesh says,

> "Bondage is nothing more than the illusion that you are an autonomous entity."

The concept of the separate "I" appears in the child after the appearance of the intellect, and after there is sufficient conditioning in the body-mind organism (see Section 5.8). Awareness then identifies with this "I" concept (the second level of identification) to produce the sense of personal doership and choice, and the fictitious "me", ego, or individual (see, e.g., Sections 7.6, 7.7, 7.8). Now there is objectification (which we may also call entityfication) as well as conceptualization; or dualism (which includes the sense of separation) as well as duality (which is purely conceptual, see Section 9.5).

Whenever there is the sense of personal doership, there is also suffering because, in addition to the mind functioning as the working mind, it also functions as the thinking mind (see Section 11.9). The sage does not suffer even though there may be pain because there is no sense of

personal doership that results in resistance and clinging, and no thinking mind (see Chapter 22).

When an object is said to exist, what do we mean? It means that Awareness has identified with the "I"-concept, resulting in the belief that the "I" is separate from the rest of the manifestation. Thus, the "me" is said to exist. From this, we can see that existence is conceptualization plus identification. After Awareness identifies with the "I"-concept, the pernicious beliefs in the existence of other objects also arise. Objects seem real because they seem to exist independently of each other and of our awareness of them. However, independent existence is nothing but a product of conceptualization, identification, and belief. In Reality there exists no "me" or any other kind of object. There is only Consciousness.

Exercise: Do the following exercise with your eyes closed while looking past your thoughts directly at the sensations themselves. What is your immediate nonconceptual experience of the following:
1. There are sounds, but is there something making the sounds?
2. There are sensations of touch and pressure, but is there something causing the sensations?

[Note: Sometimes we might carelessly say that Consciousness exists, but as we have already seen, Consciousness includes all existence and nonexistence, and transcends both existence and nonexistence (see Section 10.1). Another type of confusion results when the word existence is used to refer to the pure sense of Presence that always accompanies pure Awareness whenever manifestation is present. This might be called pure Existence, but we shall avoid using this terminology.]

Everyone can say the following: I am not an individual, and I am not limited. As pure Awareness, I am unlimited Reality. Reality is the same whether the eyes are open or closed. When the eyes are closed and all thoughts and images are absent, I am the only Reality. When the eyes are open, and objects seem to be present, I am still the only Reality. Reality underlies and pervades all the objects that I perceive. That is why I am everything and everything is Me.

On p. 43 of *The Elements of Buddhism* (1990), John Snelling says,

> "Central to the Buddha's teaching is the doctrine of anatman: "not-self." This does not deny that the notion of an "I" works in the everyday world. In fact, we need a solid, stable ego to function in society. However, "I" is not real in an ultimate sense. It is a "name": a fictional construct that bears no correspondence to what is really the case. Because of this disjunction all kinds of problems ensue. Once our minds have constructed the notion of "I," it becomes our central reference point. We attach to it and identify with it totally. We attempt to advance what appears to be its interests, to defend it against real or apparent threats and menaces. And we look for ego-affirmation at every turn: confirmation that we exist and are valued. The Gordian Knot of preoccupations arising from all this absorbs us exclusively, at times to the point of obsession. This is, however, a narrow and constricted way of being. Though we cannot see it when caught in the convolutions of ego, there is something in us that is larger and deeper: a wholly other way of being."

On p. 64 of *Nuggets of Wisdom* (2005) by Ramesh Balsekar, he says,

> "The total acceptance of non-doership means the end of the load of guilt and shame for one's own actions and the load of hatred and malice towards the other for his actions. The removal of the load means the automatic presence of peace and harmony--equanimity."

On p. 65, he says,

> "There is a distinct difference between the anger, grief or fear of the sage and that of an ordinary person. The sage's emotion is not based on any selfish motivation; and the sage's emotion is always in the present moment, and therefore very short-lived. No residual impression remains in the mind that could lead to involvement in horizontal time."

The beliefs in the existence of the "me" and of the world are more persistent than they would be if they were known to be purely conceptual. Since the mind consists not only of thoughts, but also of feelings, emotions, sensations, and perceptions, identification and belief can percolate down to these other levels, too. In particular, the emotions of guilt, shame, hatred, malice, envy, jealousy, pride, and arrogance are compelling evidence for a continuing identification with, and belief in, the "me". Upon awakening, these emotions disappear. Other emotions may arise, but there is no identification with them, so they quickly disappear without causing suffering. In particular, when a sage exhibits anger, it passes quickly without lingering because there is no identification with it.

Question: How does the sense of personal doership lead to suffering?
Question: How do the following emotions depend on the sense of personal doership? Guilt, shame, hatred, envy, jealousy, pride.

Belief in separation is extremely persistent, and is virtually invulnerable to superficial mental practices, such as the mechanical repetition of aphorisms, affirmations, or denials. For example, the thought that "I" exist as an individual is not nearly as difficult to see through as the feeling that "I" exist. Therefore, in order for a practice to be effective, it must be seen and felt directly that there is no "me" and there is no separation. Such practices are the subjects of Chapters 20, 22, 23, 24.

It is the appearance of the conceptual, dualistic individual that is the source of all conflict, suffering, and striving in the world. However, the individual is an illusion because the apparently individual awareness is actually still pure Awareness. There is always only one Awareness, never multiple awarenesses. The individual is only a conceptual object because its subjectivity is really pure Subjectivity.

When the "me" seems to appear, a boundary seems to arise between itself and everything else. This is represented in Figure 1 of Chapter 10 by the boxes in the upper right labeled "me" and not-"me". The boundary line between the "me" and the not-"me" becomes a potential battle line, with the "me" warring with the not-"me". The only way this battle line can be eliminated is for the "me" to vanish completely, i.e., for the recognition to occur that there never has been a "me". This is the perception of the sage.

11.5. Ownership: The third level of identification

We have seen that the first level of identification is the manifestation itself, when Consciousness becomes aware of Itself, while the second level is identification of Awareness with the concept of the separate "I" and its doership, resulting in the fictitious "me". The primary self-image of this illusory entity is that of observer, doer, thinker, decider, and experiencer. But conditioning and identification produce not only this false self, but also various kinds of thoughts, opinions, and images about the false self. Some examples of these are its competence, incompetence, beauty, ugliness, goodness, and evilness.

With the appearance of these concepts arises also the possibility that Awareness will identify with them. This results in a third level of identification, the level of ownership, or "mine", consisting of many forms of embellishment on the basic "me". Without this third level of identification, the "me" is bare, consisting only in the sense of doership (which includes observership, thinkership, and decidership). With it, the "me" becomes clothed not only in thoughts and images, but also in feelings and emotions. Feelings and emotions do not cause suffering unless there is ownership of them. Then many different kinds of suffering occur. The third level of identification is the one that causes all the trouble (some might say all the fun) but it depends entirely on the assumed existence of the doer. This fully identified (clothed) "me" seems to suffer unlimited agonies over whether it is good enough, beautiful enough, smart enough, competent enough, healthy enough, strong enough, loving enough, caring enough, and many other "enoughs". It feels guilty about "its" actions in the past, and worries about how "it" will perform in the future. It sometimes sees itself as a bag of shit, and at other times, as a god or goddess. However, sooner or later it will see itself as a victim, i.e., as an entity that suffers at the hands of something else (see Section 11.7).

Question: Do you feel as though it is your fear, desire, anger, boredom, or guilt?

11.6. Polar pairs, separation, and suffering

It is apparent from the preceding paragraph that we are beginning to be immersed in dualistic language when we speak of the doing and functioning of the "me" or ego. For the purpose of efficient communication in the remainder of this chapter, we shall often use this dualistic mode of speaking. However, it should always remain clear that the ego, being nothing but a concept, is powerless to do anything. Everything that happens is still entirely the impersonal functioning of Consciousness. Nobody ever does anything because there is nobody to do it.

On p. 147 of *I Am That* (1984), Nisargadatta Maharaj says,

> "What is birth and death but the beginning and the ending of a stream of events in consciousness? Because of the idea of separation and limitation they are painful. Momentary relief from pain we call pleasure - and we build castles in the air hoping for endless pleasure which we call happiness. It is all misunderstanding and misuse. Wakeup, go beyond, live really."

And on p. 416, he says,

> "Our life is full of contradictions. Yet we cling to it. This clinging is at the root of everything. Still, it is entirely superficial. We hold on to something or somebody with all our might and next moment we forget it; like a child that shapes its mud-pies and abandons them light-heartedly. Touch them -- it will scream with anger, divert the child and he forgets them. For our life is now, and the love of it is now. We love variety, the play of pain and pleasure, we are fascinated by contrasts. For this we need the opposites and their apparent separation. We enjoy them for a time and then get tired and crave for the peace and silence of pure being."

In the meditation for July 28 in *A Net of Jewels* (1996), Ramesh says,

> "The intellect divides everything between what it considers pleasant (acceptable) and unpleasant (unacceptable) and then opposes anything it deems unacceptable as a "problem" that needs solving! Thus any problem can only be solved at its source, which is the intellect that conceived the problem as a problem in the first place."

In each present moment, we can see that we are doing nothing (see Sections 10.2, 23.2), thus there can be no doer in the present moment. The ego is the identification with the thought that "I" have done something in the past, or "I" can do something in the future. Thus, it is inseparable from the concepts of past and future (see Section 12.1). That is why its desires and fears are always tied to the past or future.

Identification as the ego gives me the perception that "I" am separate from my body-mind, which makes the body-mind a threat to my survival, and separate from you, which sometimes makes you appear to be a threat to my survival. The threats seem real only because hidden in the ego is the knowledge that it itself is only a concept, and is therefore vulnerable to myriad forces outside itself. Intrinsic to ego identification is the fear of ego death even though death is a concept that is not understood by the ego (the mind cannot conceive of its own absence). Since fear of death is intrinsic to the ego, the body, which is the sentient object that is the basis of the ego, appears to be the ego's enemy because it is vulnerable to many outside forces as well as to its imagined defects. The ego knows that the body must die so it lives in constant fear of this happening. At the same time, the ego glorifies the death of the body when it can imagine that somehow death will glorify itself. To some egos, nothing is more glorious than to die in battle.

Question: Are you afraid to think that you have no control?
Question: Are you afraid of any of your feelings?

Since the ego is nothing but a concept, other concepts can appear to be threats to it, including concepts about the ego itself. Some of these concepts conflict with the ego's self-esteem, such as the concepts of being wrong, ignorant, weak, defective, unattractive, or guilty. When it sees itself as being deficient, such as when it compares itself with other egos or when another ego insults it or offends it, it attacks itself through self-hatred and self-punishment. When it sees others as guilty, enemies, or victimizers, it attacks them. The ego always sees itself as victim, never as victimizer, and thus is able to justify virtually any action in defense of itself. The ego finds it very easy to ally itself with other concepts because it finds strength in concepts. This is particularly true of ideological concepts, many of which are adopted by numerous other egos, thus allowing the ego to see numbers as strength.

Question: What are some examples of the ego thinking of itself as victim, and attacking?

The concept of "I" necessarily requires the concept of its polar opposite, the not-"I", or other, i.e., everything but the "I". Since "I" and not-"I" are a polar pair, the "I" sees everything as being divided into polar pairs. The concept of right necessarily requires the concept of wrong, good requires evil, God requires Satan, guilt requires innocence, light requires darkness, health requires illness, rich requires poor, knowledge requires ignorance, etc. All of these are merely concepts that are formed by drawing conceptual boundaries between the opposites in an inseparable pair of concepts. These boundaries are purely arbitrary, and can be moved as the occasion demands. For example, what appears to be right at one time and place will appear to be wrong at another, or what appears to be wealth in one place will appear to be poverty in another.

Question: What are some examples of good here being evil elsewhere, and vice versa?

[Note: Many passages in the Bible can be interpreted as metaphors for nondual teachings. For example, Genesis 2:17 graphically describes the fatal consequences of dividing Consciousness into polar pairs:

> *"... but of the tree of the knowledge of good and evil you shall not eat, for in the day that you eat of it you shall die."*]

On p. 49 of *I Am That* (1984), Nisargadatta Maharaj says,

> "The state of craving for anything blocks all deeper experience. Nothing of value can happen to a mind, which knows exactly what it wants. For nothing the mind can visualize and want is of much value."

Simultaneously with the "I"/not-"I" polar pair, and inseparable from it, arises the desire/fear polar pair. This is because the ego, thinking of itself as being separate, finds it impossible to feel whole, and, regarding itself as a doer, seeks something outside of itself in order to complete itself. This fact reveals the fallacy in any attempt by the ego to be without desire, such as adopting a spiritual path that stipulates the renunciation of desire (the desire to renounce is just another desire). There are many forms of the desire/fear polarity. Among them are love/hate, attraction/repulsion, attachment/aversion, clinging/resistance, and approach/avoidance.

Since the ego is inseparable from fear/desire, it conceptualizes everything in terms of fear/desire. Its overpowering fear of weakness, loneliness, and death (much of the time unrelated to threats to the body) makes its desire for their polar opposites, namely power, relationships, and survival, overpowering. It sees every boundary line between these opposites as a potential battle line.

The law of the ego is that only the fittest survive. It equates winning with surviving and losing with dying, whether academically, professionally, politically, socially, or economically. The stress generated by the struggle to win dominates life in the materialistic, individualistic world, in which there is never enough time, money, or effort. Fear of losing is the basis of the

struggle, but no matter how much effort is made, winning is never guaranteed, so instead of fear being relieved by the struggle, it is reinforced by it. Paradoxically, trying to abandon the struggle does not remove the fear because that is merely doing something else. There is no way to win this battle except by examining and understanding its basis, and seeing that there is no ego, nor any enemy.

Question: What are some specific examples of the struggle for survival? Think particularly of feelings and emotions.
Question: Have you ever felt victimized by a parent? By a teacher? By a lover? By yourself?

All conflict and suffering are a result of the conceptual victim drawing conceptual boundaries and seeing the resulting split pairs as desirable/fearful, friend/foe, lovable/hateful, acceptable/unacceptable, etc. Suffering must continue as long as wholeness appears to be split into opposing pairs. The only cure for suffering is to see that there is no separation. The world will always be seen as a fearful/desirable place until this occurs.

As long as there is a sense of separation, the world will sing its siren song, and will lure the identified ones to certain suffering. On p. 73 of *The Wisdom of Nisargadatta* (1992) by Robert Powell, Nisargadatta Maharaj says,

> "Everybody sees the world through the idea he has of himself... If you imagine yourself as separate from the world, the world will appear as separate from you and you will experience desire and fear. I do not see the world as separate from me, and so there is nothing for me to desire, or fear."

11.7. The victim/victimizer polar pair

The concept of victimizer is the polar opposite of the concept of victim. Where there is an image of the latter, there is necessarily an image of the former. The reason we suffer is not only because we identify as the helpless victim, but also because we perceive something as being our tormentor. The concept of victimizer comes from the idea of how things "should" be. Whenever something is in disagreement with our idea of how it should be, then it must be "wrong", i.e., it is seen to be what is victimizing us. It is important to realize that it is identification as the victim that makes the victimizer seem real. All suffering comes from resisting the victimizer, which is as fictitious as the victim.

It is tempting to think that "I" am victimized by my spouse, by my boss, by my guru, by the person ahead of me in the checkout line, by my unfortunate birth, by my parents, by my teachers, by circumstances, by life, by the world, or by God. However, suffering is never caused by anything other than a perceived separation within my own mind. This is most clear when the victimizer seems to be my own body-mind so that "I" seem to be the victim of my own thoughts, feelings, emotions, and sensations. As a result, "I" hate them, anguish over them, agonize over them, condemn them, am disgusted with them, or am disappointed with them.

When we blame somebody outside of ourselves, we project the image of victimizer onto them. For example, when our parents were not the parents we wanted them to be (the way parents "should" be), we had an image of our parents as victimizers and we blamed them for

victimizing us. We could not have suffered as victims if there had been no image in our minds of them as victimizer. From the viewpoint of the ego, there is nothing more frustrating than the absence of somebody or something to blame. That is why nonduality is so threatening to it.

What seems to be victimizing us is not independent of the mind, but is an image in the mind. Both victim and victimizer are nothing but images in our minds. It is essential to realize this in order to be free from suffering. Suffering is nothing but the concept and feeling of victimhood. Freedom requires seeing see that both the victim and victimizer are in our own minds.

Below are examples of some common attitudes that indicate that the person holding them is identified as victim. A valuable exercise is to look for the conceptual victimizer in that same person's mind as well.

"You can't beat the system."	"I'm mad as hell and I'm not going to take it any more."
"Don't get mad. Get even."	"Those extremists are the problem."
"Big government is the problem."	"Those liberals are the problem."
"Those conservatives are the problem."	"Racism is the problem."
"Those multiculturists are the problem."	"I need you!"
"They are trying to turn the clock back!"	"You promised!"
"I can't live without you!"	"He done me wrong."
"How could you do that to me?"	"Don't start on that again!"
"No rest for the wicked."	"My past is catching up with me."
"What on earth made me say that?"	"What have I done to deserve this?"
"Why *me*?"	"Nobody understands me!"
"There's nothing I can do."	"I'm just no good."
"You have to get it while you can."	"It's kill or be killed."
"Do it to them before they do it to you."	"I'm just a slave to my passions."
"Poor me!"	"It's a jungle out there!"

The ego needs enemies in order to survive. An "enemy" can be anything that appears to resist or oppose the ego, e.g., a competitor, an opponent, an adversary, a thought, a feeling, an emotion, or a sensation. The ego gains strength from resisting and fighting enemies and from recruiting allies. Witness the need for opponents and cheerleaders in sporting events, for competitors and friends in the workplace, for enemies and allies in wars, and for the concepts of good and evil in the mind. The ego and the world of egos thrive on the clash between polar opposites. Without the concept of victimizer, and the strength that it gives the ego, the concept of victim could not survive. Disidentification from both is necessary for peace of mind.

It is easy to fall into the trap of blaming one's ego for one's suffering. But, who is it that is blaming the ego for its suffering? Can there be two egos? The ego, being only a concept, does not and cannot do anything. Suffering occurs for one reason and one reason only, and that is because of our identification with the sense of a separate "I". Without this identification, there could be no helplessness, guilt, shame, pride, hatred, envy, or jealousy. However, suffering is not necessary or inevitable. Understanding how the mind functions and inquiring into who it is that suffers makes it clear that neither the victim nor the victimizer exists. Part 3 will bring more clarity to this practice.

No concept can reflect or describe the intrinsic wholeness of nature. For this reason, every concept that we use in this course is fundamentally inadequate to describe Reality---we can only point to It. All concepts that we use are merely pointers. The only way to <u>know</u> Reality is

to see that we are Reality. That is why this course cannot teach us what we really are, but it can encourage us to find out what we really are, which means to be what we are. Essential to being what we are is to see what we are not. This means that we must see that we are not a body, not a mind, not a doer, not a thinker, not a decider, not an ego, not a self-image, not any thing. In contrast to the impossibility of seeing what we are, it is possible to see what we are not, because anything that we think we are is merely a concept or image, so we can also see that we are not it. The reverse of identification is disidentification, and seeing what we are not is an essential part of disidentification.

Question: Have you ever had an experience of unlimited vastness? [This might be described as the (usually sudden) vision that I am far more than I perceive.] How would you describe it? Can it even be described?

One should not assume from the above that concepts are useless or unnecessary. This course consists entirely of concepts, and they are essential for functioning in the world. Conceptualizing by itself is not a source of problems--it is identification with concepts that causes all problems. The sage uses concepts as a necessary part of living but does not identify with them. In particular, there is no identification as the "me" so there is no belief in a sage entity.

11.8. Sin, guilt, and shame--monstrosities of mind

(The heading of this section was adapted from Ramesh's 2000 book with a similar title, see Appendix.)

In the meditation for March 1 in *A Net of Jewels* (1996), Ramesh says,

> "Responsibility and guilt are imaginary concepts based on the mistaken notion that a sentient being has independent existence, autonomy and choice of action. But to think that any individual being can act independently is itself the basic mistake. Although sentient beings appear to act and react, all functioning really happens only in Consciousness."

No concept causes more suffering than that of sin, and no emotions cause more suffering than those of guilt and shame. Everybody grows up with them because they are instilled by religion, government, society, and parents in order to coerce obedience. There are two types of sin: 1) the feeling that it is possible to do something that is wrong or evil, and 2) the feeling that it is possible to be somebody who is bad or worthless. Guilt is self-condemnation and despair for the former. Shame is self-punishment and disgust for the latter. [In Christianity, both guilt and shame stem from the concept of "original sin", the "sin" that Adam supposedly committed by disobeying God. See, e.g., Romans 5:12: *"Therefore as sin came into the world through one man and death through sin, and so death spread to all men because all men sinned"*. A more enlightened interpretation of original sin is that it means the belief in being separate, which everybody is conditioned into by age two (see Sections 5.8 and 11.4). The belief in separateness is the belief in being defective and incomplete, see below.]

Question: Have you ever felt guilt? Shame? In your own experience, how did they originate?

Question: Have you ever felt totally alone and isolated? Along with this feeling, was there also a feeling of shame?

Both guilt and shame require the concepts of victim and victimizer (however dimly perceived). Thus, guilt/shame are based on the dual concepts of one entity that victimizes and another that is victimized. (Even God is sometimes experienced as a victimizer). When a person is old enough to perceive himself/herself to be "victim" and another person to be "victimizer", he/she blames the "victimizer" instead of looking directly at the victim in order to understand it. However, understanding it is the only way to become free from it. Blaming the "victimizer" is of no use because that only reinforces and perpetuates it. Furthermore, if the "victim" and "victimizer" have a personal relationship, blaming the "victimizer" results in the "victimizer" feeling guilt/shame, who, not understanding the feeling, sees the "victim" as "victimizer", and then tries to offload the guilt/shame onto him/her, who in turn feels even more guilt/shame, and tries to offload it back again ... etc. This blaming/counterblaming interaction can continue in other relationships throughout a person's life, but both victim and victimizer are nothing but concepts, and to realize that is to become free from guilt/shame. (This does not necessarily mean that they disappear; only that they are no longer binding.)

Question: Have you ever been in a blaming-counterblaming relationship? Did you ever feel like the victimizer in it, or only the victim?

Of guilt and shame, shame causes the greater suffering because it is so deep-seated and pervasive that it seems irremediable (see the important book by John Bradshaw, *Healing the Shame that Binds You* (1988)). Shame can be conditioned in a child in two ways. One way is by identification with shame-based parents (who themselves were conditioned into shame by their parents). Because the parents hate themselves for feeling defective, so does the child. A second way is for the child to perceive itself as being abused or abandoned by shame-based parents, whether sexually, physically, or emotionally.

Sexual abuse can be overt (e.g., coercive or seductive), or covert (e.g., suggestion, innuendo, or invasion of privacy). Physical abuse stems from the belief that a child's will must be broken in order to socialize it. ("Spare the rod and spoil the child" is justified in the Bible in several places, including Proverbs 13:24: *"He who spares the rod hates his son, but he who loves him is diligent to discipline him."*) Emotional abuse stems from the belief that certain emotions are sinful and must be suppressed, especially anger and sexual urges (two of the "seven deadly sins", named in various biblical passages). But the child is driven crazy when the parents are allowed to exhibit anger, even violently, and the child is not.

Because the child views its parents as being God, it feels that it is being punished for being defective, a feeling that haunts the child as soon as it begins to feel separate. The feeling of being defective is even compounded by feeling defective for feeling defective. These feelings lead to a lifetime of trying to compensate for them by striving to be perfect. However, perfectionism is a losing game because failure comes inevitably and often. Fear of failure then leads to unrelenting anxiety, only fleetingly relieved by occasional feelings of accomplishment and success. However, every failure leads to self-anger/hatred for being weak, and to anger and rage towards those we think make us feel that way. But parents, culture, and society all demand that we suppress these feelings as being socially unacceptable. Furthermore, so

painful are they that the mind goes still further and represses them, thus inhibiting them from rising into awareness (see Section 21.2).

Question: Do you strive to be perfect? In your own experience, how did that originate?

Repression leads to depression, which is a feeling of hopelessness, helplessness, and despair. This is occasionally relieved by anger, which is welcomed for its feeling of power and strength. Over the long term, depression can cause pronounced changes in brain chemistry. Then, regardless of later achievements and successes, deep down there is still a feeling of worthlessness, often for the remainder of one's life. Even treatment with drugs and/or talk therapy may not completely remove this feeling in spite of the relief that they can provide.

However, because repression/expression is a polar pair, what is repressed must be expressed. The mind does this in a way that conceals what is repressed. Some of the most common ways are the following:

> 1) Self-punishment is converted into punishment of others. The ego clings to its own versions of the Golden Rule to justify doing this: "Do to others what you think they have done to you"; or, "Do it to others before they can do it to you". Uncorrupted biblical justification for the ego's way is given in Deuteronomy 19:21:*"Your eye shall not pity; it shall be life for life, eye for eye, tooth for tooth, hand for hand, foot for foot*"; and in Deuteronomy 5:9: "... *for I the LORD your God am a jealous God, visiting the iniquity of the fathers upon the children to the third and fourth generation of those who hate me*".
>
> 2) Self-punishment is converted into physical illness (see Section 21.2); 3) it is converted into addictions (see Section 19.1); 4) it is converted into self-righteousness through religiosity, patriotism, moralizing, or judgmentalism; 5) it is covered up with "goodness" or "niceness" by pretending to be "good" or "nice"; 6) it is projected onto others by seeing them as being defective and therefore requiring correction.

Actual sin of any type is impossible because there is no "I" to be sinful and no doer to commit sin. The concepts of sin, doership, and "I" go hand in hand and reinforce each other. Consequently, complete relief from feelings of sin, guilt, and shame is possible only by seeing that there is no "I" (see Chapters 20, 21, 22, 23, 24). If, instead, we try to suppress our feelings of guilt and shame by denying them, they get repressed, and repression leads to depression (see Section 21.2). On the other hand, we might even resist not feeling guilty because we have been so strongly conditioned to feel guilty. The only effective way to end all of our suffering is through spiritual practice. This might take years because of the years of conditioning it took for us to believe so strongly in the "I".

Exercise: The next time you feel guilt or shame, see if you can simply feel it without reacting to it. Can you feel yourself tightening up against it or holding on to it?

Worldly love is dualistic love (see Chapter 16). Therefore, many cases of worldly love, especially romantic and married love, are heavily infected with a strong feeling of guilt. That is what gives the "love" its anguish and torment, and what results in a repeating cycle of failure, guilt, blame, and sometimes "forgiveness". But this "forgiveness" is never true. If it were, the

cycle would end immediately because true forgiveness is seeing that there is no victimizer and no victim, and there never has been (see Chapter 22, Section 24.2).

Exercise: Examine your concept of sin. Where did it come from? Is it a source of suffering, peace, or neither for you?
Exercise: Examine your concept of God. Where did it come from? Is it a source of suffering, peace, or neither for you?
Question: Have you ever felt tormented by love? In what way was it a result of your concept of what love should be like?

11.9. The thinking mind and the working mind

In the meditation for March 8 in *A Net of Jewels* (1996), Ramesh says,

> "Thinking is a pernicious, acquired habit. It is not man's real nature. All that comes out of it is sheer nonsense for the strengthening of the false sense of ego."

In order to clarify the differences in the functioning of the mind before and after awakening, Ramesh distinguishes between the thinking mind and the working mind. The thinking mind is the part of the mind that suffers and which seems to be located in the head (This is one form of the I_i/I_o split discussed in Section 5.12.) It is the personal sense of doership and responsibility that results from identification with the "I"-concept (see Section 11.4). Its primary goal is to survive by conceptualizing the future as an extension of the past. For this, it clings to its perceptions of sin and guilt, worries about the future and regrets the past (compounded by worrying that in the future it will regret the past), wishes things were different, and resists life as it is. It thinks it has some control, but not enough, so frustration, dissatisfaction, and anxiety are its constant companions. It judges all other conceptual objects according to whether they will enhance its own sense of completeness and worth or whether they are threats to it. Threats to the ego are seen as objects of hatred, guilt, fear, envy, and jealousy, while completion objects are seen as objects of desire, worship, and adulation. The judging that is the source of all of these emotions is a result of identification as "I"-doer. When disidentification occurs, judging and its emotions disappear. Prior to disidentification, the thinking mind and its preoccupations with past and future can easily dominate the mind and prevent it from accomplishing its tasks, or at least obstruct it or alter the natural priorities of the tasks that the mind must do. An example of an experience of pure thinking mind is being "lost" in daydreaming. (In his 2000 book, *As It Is*, Tony Parsons refers to the thinking mind as "abstract" thought. This is thought that maintains the illusion of separation by living in the past or the future, neither of which exists, as is shown in Section 12.1. All daydreaming is living in the past or future.) The thinking mind can disappear and reappear many times per hour depending on how the organism is occupied.

Question: What is your own experience of pure thinking mind?

The part of the mind that is task-oriented is the working mind. (In *As It Is*, Tony Parsons refers to the working mind as "natural" or "creative" thought.) The working mind functions in the whole body-mind rather than in just the head. It continues after the disappearance of the sense of

personal doership because it is necessary for the continued functioning of the organism. Everybody experiences the working mind whenever the "I" is not present. For example, a common experience is to lose track of time while being "lost" in one's work (in one's working mind). A musician or other artist cannot function effectively if he/she thinks he/she is what is performing or creating. All types of work are done more efficiently and creatively when the sense of doership is absent.

Whereas the ego strives to survive, for the working mind, survival (or not) happens naturally. The thoughts and emotions that are necessary for its functioning are acted upon, and then they disappear so they do not persist. There is no resisting, judging, fearing, worrying, or doubting, all of which would interfere with its functioning. The working mind uses whatever concepts and past experience appear in it, but in the absence of the thinking mind, there is no identification with them so no pseudo-entities are formed.

Hypocritical action can result when the selfishness of the thinking mind interferes with the selflessness of the working mind. This has been experimentally studied by P. Valdesolo and D. DeSteno (*The Duality of Virtue: Deconstructing the Moral Hypocrite*, Journal of Experimental Social Psychology, 44, July 2008, doi:10.1016/j.jesp.2008.03.010). They found that the behavior of a participant was more selfless when the thinking mind was distracted by a cognitive exercise while a decision was being made, and more selfish when the thinking mind was not thus distracted.

Question: What is your own experience of pure working mind? What is the contradiction in that question?

On p. 121-122 of *Advaita, the Buddha, and the Unbroken Whole* (2000), Ramesh responds to a questioner:

> "Swamiji: With somebody who hasn't reached the state of Enlightenment, new conditioning is taking place, whereas somebody who has reached the state of Enlightenment or nondoership, no new conditioning is occurring, but they still have previous conditioning which means they respond in a certain way to certain external stimuli.
>
> "Ramesh: That is correct. The previous conditioning is usually the basic conditioning. But mostly what the sage reacts to is not so much the conditioning, as the genes or DNA...
>
> "...no new conditioning is taking place [in the sage], because the new conditioning would always refer to the ego accepting what it says, or to the thinking mind. But what is happening here is new conditioning, the effect of which may be to alter or amend the existing conditioning. But since in the case of the sage no doubts remain there is no room for conditioning to take a seat."

Conditioning is of the thinking mind. Prior to awakening, it seems as though the ego is the owner of most thoughts, feelings, emotions, and sensations, leading to the experiences of "my" desire, "my" aversion, "my" longing, "my" work, "my" body, "my" mind, etc. Thus, the thinking mind, or ego, is usually thoroughly identified (at the third level) with its thoughts and self-

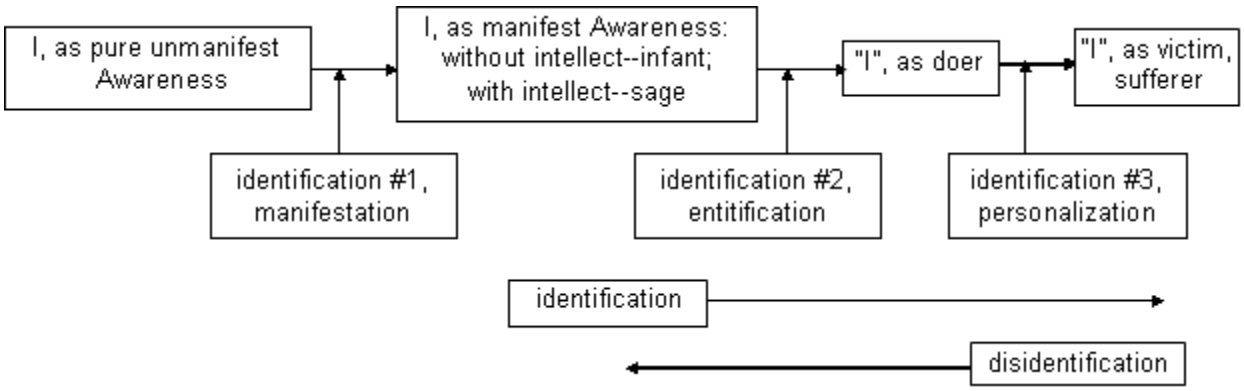
images, resulting in the emotions of fear, desire, envy, frustration, guilt, anxiety, indecision, aversion, and attachment. After disidentification and awakening, the persistence of the basic conditioning and its reactions to circumstances may result in some of the same thoughts and emotions occurring to the working mind, but they are never identified with. They are never judged, rejected, nurtured, resisted, or clung to; therefore they disappear quickly.

It must be realized that both the thinking mind and the working mind are instruments used by Consciousness in its functioning. There is nothing wrong or right, or good or bad, about either of them. They both just appear, and eventually they both just disappear. Initially, Consciousness functions through both of them, harmoniously through the working mind, and unharmoniously through the thinking mind. After the thinking mind disappears, Consciousness continues to function through the working mind. Since separation and doership are not concepts of the working mind, its functioning is always in harmonious accord with the Whole.

11.10. Summing up. . .

Suffering is a consequence of identification as a separate "I". This does not mean that suffering does not seem real to the "one" who suffers. The only cure for suffering is to see that there is no separate "I", after which it is seen there never was any victim that could have suffered. Because Awareness is our true nature, it is easy to see that the more aware we are of our identifications, the less identification there is. Thus, awareness is the key to disidentification and freedom, and is the means to the realization that pure Awareness is what we are. When the seeker seeks Reality, it is Reality seeking Itself.

The following diagram illustrates the concepts discussed in this chapter. Disidentification is the process of understanding, becoming aware, inquiring into Reality, and direct seeing. These will be discussed more fully in Part 3.



Chapter 12. Space, time, causality, and destiny

12.1. The concepts of space and time

In the meditation for April 12 in *A New of Jewels* (1996), Ramesh says,

> "The crux of man's dilemma lies in the concept of time. While chasing his mythical happiness of the future, man has no time to enjoy the present moment. And actually there is no such thing as the present because by the time one thinks of it, it has already

> become the past. Therefore, what is vital is not thinking about the present but actually being the present moment -- and that is nothing other than enlightenment."

On page 316 of *I Am That* (1984), Nisargadatta Maharaj says,

> "It is the clinging to the false that makes the true so difficult to see. Once you understand that the false needs time and what needs time is false, you are nearer the Reality, which is timeless, ever in the now. Eternity in time is mere repetitiveness, like the movement of a clock. It flows from the past into the future endlessly, an empty perpetuity. Reality is what makes the present so vital, so different from the past and future, which are merely mental. If you need time to achieve something, it must be false. The real is always with you; you need not wait to be what you are."

And on p. 525, he says,

> "Before the mind, I am. 'I am' is not a thought in the mind; the mind happens to me, I do not happen to the mind. And since time and space are in the mind, I am beyond time and space, eternal and omnipresent."

Consciousness is all there is. The reality of Awareness/Presence is not a concept. Everything else is. Space is a concept that is no more real than the objects that appear in it. The concept of the three dimensions of space allows the concept of three-dimensional objects to appear. All spatial objects are purely conceptual, including the human body.

The conceptual nature of space is clarified if we think of the difference between the sense of "hereness" (the sense of hereness/nowness is called the sense of Presence) and the concept of "here". The concept "here" implies the concept "there", which is equivalent to "not here". Thus, the unbroken wholeness of hereness has been conceptually divided into two parts, here and there. Without the concept of space, there is only the wholeness of hereness.

Without the concept of three-dimensional space, there is no concept of three-dimensional depth, so all spatial forms appear at the same "depth" in the mind. This immediately becomes clear when we close our eyes and everything appears at the same depth. With our eyes closed, there is no occlusion of one object by another as there is with our eyes open. When we open our eyes again, thoughts and "external" objects seem to appear at different depths. However, since there is no intrinsic difference between thought and perception (see Section 9.2), without the concept of depth, thoughts and objects both appear at the same depth.

Exercise: Close your eyes and see if objects (images) appear at different depths. What do you see?

Because the body is bilateral, we conceptualize space into left/right. Because gravity and our sense of balance keep us right-side-up, we conceptualize space into up/down. However, even with our eyes closed and there are no visual images, there are still body sensations (called proprioception) that give us the sense of horizontal and vertical orientation and movement.

Question: How can a blind person conceptualize depth?

In the Copenhagen interpretation of quantum theory, successive wavefunction collapses (see Sections 6.3, 6.4) allow the concept of change to appear. Because the concept of time depends on the concept of change, we have the equivalencies: time=change=duration=succession. The concept of time is complementary to the concept of space, and forms a fourth dimension that is perpendicular to the three spatial dimensions. As with space, it becomes clear that time is only a concept if we compare the sense of "nowness" (from the sense of hereness/nowness) with the concept "now". The concept "now" implies the concept "then", which is equivalent to "not now". The unbroken wholeness of nowness has been broken into two parts, now and then. Without the concept of time, there is only the wholeness of nowness. One well-known attempt to point to the Reality that transcends conceptual space-time is the 1971 book by Ram Dass entitled, "*Be Here Now*". (Reportedly, at one time it was the third most popular book in English, next only to the Bible and Dr. Spock's baby manual.)

The concept of time depends on the presence of thoughts of the past, thoughts of the present, and thoughts of the future (see Section 9.5). Without a comparison between these three kinds of thoughts, we could not form the concept of change. Without the concept of change, there is no experience, so all thoughts, feelings, emotions, sensations, and perceptions are experiences that depend on a comparison between thoughts. Time can be conceptually divided into two major parts, past thoughts and future thoughts, which are inseparable polar opposites (this is a more conventional division than dividing it into now and then as in the previous paragraph). The concept of now becomes nothing more than a thought of the boundary between past thoughts and future thoughts. (The real now is not a boundary, but is "nowness".)

Exercise: For the next few days, as often as you can remember it, practice being here now. What was your experience? Was it worth continuing the practice?
Exercise: Close your eyes. Do you feel that you are in your head? Again close your eyes. Now before thoughts and images arise, see if time exists for you. Do you feel that you are here, now in your head? Again close your eyes, but now go inward and downward into the body. Do you feel that you are here, now in the whole body?

Without the concepts of time and space, all further conceptualization is impossible. In particular, the concept of the personal identity arises from the persistency of the concepts of the body-mind, personal doership, and choice (see Section 11.4). Without such persistency, the conceptual “I” could not arise. Thus, the “I” depends on the concept of time. In timelessness, there is no “I”.

We see only one thought at a time. Thoughts of the past, present, and future are what give us the impression that time exists. If we could see them all simultaneously, the concept of time would not arise. (There is a remarkably accurate saying: "Time is what keeps everything from happening all at once.") We may have visions of the "future", even startlingly "real" ones, but these occur only in the subjective present. The same is true of visions and memories of the "past". These examples show that the "past" and "future" do not exist as separate eras but actually consist of thoughts in the subjective present, which is the only "time" there is.

Consequently, just as there is no objective reality outside of the mind for space and the objects therein, there is no objective reality outside of the mind for time and the events therein (see Section 9.2). Whatever past or future there is exists only as concepts in our minds.

Exercise:
• In the teaching of nonduality, Consciousness is Awareness plus all of the arisings in Awareness.
• Awareness does not exist in space. Space is only a concept in Awareness.
• Since space is only a concept, objects are not objectively separate from each other.
Therefore, separation is not real. It is only a concept.
These are pointers, not descriptors, because they point to something that cannot be described. Yet, that does not make what they point to any less real. In fact, it enhances its reality because we can directly see the truth of it ourselves. We do not need agreement from others.
Ponder these pointers deeply. See if you can see directly what they point to. Can you see that your true nature is Awareness, not any objects of Awareness such as your thoughts, feelings, emotions, body sensations, or perceptions? Can you see directly that space is only a concept in the mind? Can you see directly that separation is also only a concept in the mind?

12.2. Speculations on the concepts of nonlocality in time and space

The Bell-Aspect experiments described in Section 4.3 showed that faster-than-light correlations can occur between events at two different points in space (see also Sections 6.5, 6.6, 6.7). This is what we meant by nonlocality in space. However, in Section 9.2, we said that the mind does not exist in space-time but that space-time exists only as a concept in the mind. Thus, nonlocality in space is nothing but a concept in the mind.

In Sections 5.2, 9.4, we discussed nonlocal mind. By nonlocal mind we mean different minds appearing within the context of nonlocal universal Consciousness (not in the context of space, which is in the mind). (This is a more precise definition of nonlocal mind than the one given in Section 5.2.) By virtue of nonlocal universal Consciousness, minds can communicate with each other even though they appear to spatially separate. That is why faster-than-light correlations can occur between what seem to be widely separated regions of space.

[Note: If space is assumed to be objective rather than subjective, there appear to be two different types of nonlocality (see Section 5.2). One type, such as remote viewing, is apparently independent of distance. Targ and Katra state in *Miracles of Mind* that the accuracy and resolution in remote viewing have been shown to be insensitive to distance up to 10,000 miles. With the same assumption of objective space, a second type of nonlocality is weaker the greater the distance between the two points. Because of this distance dependence, we cannot say that such phenomena are nonlocal in the strict sense. However, we shall continue to lump all such phenomena into the same category of nonlocality. One such example is the peace and tranquility that are commonly experienced in the presence of a great sage or in a group of meditators (discussed in Section 5.2 and further in Chapter 16) but which decrease rapidly with increasing separation. This type might be explained, at least in part, by the concept of the so-called subtle body, which is thought to be a nonphysical body that is associated with the physical body, but which can be spatially much larger (see, e.g., Marc Rich, *Energetic Anatomy* (2004). Barbara Brennan, *Hands of Light*, (1988), has a school in Florida where she teaches people to use auras for healing). Some people with psychic abilities are able to "see"

the subtle body as an aura and can observe it expand and contract with the expansion and contraction of its awareness. (Possibly some of the readers of this course have this ability.) The second type of nonlocality in space might be caused by the overlap of the subtle bodies, which decreases with separation because of their finite sizes. The laws that govern the subtle body, which are not known, may allow it to be nonlocal in both time and space. Since we know next to nothing about it, we cannot say whether its nonlocality is limited or whether it can be sensitive to all phenomena that have ever existed and all that will ever exist.]

Explaining nonlocality is a problem only if space is thought to be objective. If it is purely subjective, there is no problem (see Section 6.10).

Question: Can you see auras?

12.3. The concept of causality

On p. 9 of *I Am That* (1973), Nisargadatta Maharaj says,

> "Like everything mental, the so-called law of causation contradicts itself. No thing in existence has a particular cause; the entire universe contributes to the existence of even the smallest thing; nothing could be as it is without the universe being what it is. When the source and ground of everything is the only cause of everything, to speak of causality as a universal law is wrong. The universe is not bound by its content, because its potentialities are infinite; besides it is a manifestation, or expression of a principle fundamentally and totally free."

And on p. 66, he says,

> "Seeking out causes is a pastime of the mind. There is no duality of cause and effect. Everything is its own cause."

Seemingly, the most well established law in phenomenality is the law of causality, which states that the present and future are determined by the past. In fact, in everyday life, we usually use a more restricted form of this law, which states that a certain isolated set of events (such as your decision to take this course) at one time determines another isolated set of events at a future time (your active participation in this course). However, it is impossible to isolate any one event from all of the events that ever preceded it (e.g., it is impossible to isolate your decision from all of the preceding events of your life, and from all of the events in the lives of all of the people who have influenced you). Thus, isolated causality is a fiction because it requires the illusion of isolation of an event in space-time.

Exercise: Examine “your” decision to take this course. Can you separate it from the preceding events in your life? How did they lead up to it? Trace the time line back as far as you can.

Exercises: Remember a time when "you" intended to do something, but didn't.
Remember a time when "you" intended to not do something, but did.

This discussion has profound consequences with regard to our concept of free will. The concept of free will is identical to the concept of "I", the freely willing, individual self that can

freely bring about the satisfaction of its desires. This depends on the concept that there is an individual who is separate and isolated from the rest of the universe (see Sections 5.11, 5.12), who can freely choose his/her own desires (whose desires are unaffected by causality), and yet who can control to his/her satisfaction the causal chain of events in order to satisfy his/her desires. But, either causality is valid, in which case there can be no separate, isolated individual with freely chosen desires, or it is invalid, in which case there is no possibility that such an individual could ever cause anything to happen. However, even though an individual might be convinced in retrospect that he/she had no control over past events, he/she usually stubbornly clings to the belief that he/she has some control over future events. Such is the nature of identification in the face of lack of knowledge of the future.

Exercise: Close your eyes and let your attention rest on the breath. Did any thoughts or feelings come? Did they appear out of nowhere?

Question: Are you afraid to give up the sense of free will? What would be the price? What would be the gain?

We know that, within the concept of time, strict causality is impossible because of the probabilistic nature of quantum mechanics. However, if events are probabilistic rather than deterministic, then desires and actions also would be probabilistic, with no possibility of control over them by a purported doer. Thus, regardless of the degree of admixture of probability that exists in the concept of causality, it does not affect our discussion of free will and the individual.

The doctrine of causality coupled with the concept of the separate, freely willing "me", is the doctrine of karma. This doctrine states that causality ensures that all of the choices that were made in "my" past determine what happens to "me" today, and, together with all of the choices "I" make today, will determine what happens in "my" future. One might think that the concept of volition or free will could provide the possibility of escape from past karma because it would allow us to begin a new chain of causal events uncoupled from the past. However, as we have just seen, the belief in free will is incompatible with the belief in causality. In fact, the belief in free will coupled with the belief in causality can easily result in guilt and regret for past actions and in anxiety and fear of future consequences (see Sections 5.13, 11.6). But, because there is no "me", all karma must be impersonal.

Exercise: Try using the mantra "karma is impersonal" for a few days. See what effect it has on you. Do you feel more free, or not?

The belief in karma is probably largely responsible for the efforts of many religious people, particularly in Hindu and Buddhist countries, to attempt to renounce the world and all material things in order to escape from the inexorable wheel of reincarnation and bondage. They fail to realize that the real cause of bondage is the sense of the individual doer, and it is this that must be renounced. However, it is futile to ask the doer to renounce itself because by trying to renounce itself, it only reaffirms itself. The only true renunciation is the clear seeing that there is no doer.

From this discussion, we see that any discretely identifiable cause must be an isolated, separate, object or event (an evident impossibility as seen above). Thus, the concept of

separation is an intrinsic part of the concept of isolated causality. We have also seen that the concepts of separation and isolated causality are intrinsic parts of the concept of free-will and volition. We now can see why the individual has such difficulty in seeing the nonexistence of isolated causality. If isolated causality is real, then so are separation and free-will, the essential components of the ego. The ego insists on isolated causality because causality justifies its own existence!

In the commonly held concept of causality, it is the past that determines the future. This concept is an arbitrary one and is held only because the past is presumed to be known, while the future is unknown, and there is the desire to predict and control unknown future events from known past events. However, as we have seen, the concept of causality reinforces the concept of the individual, who has a desire to exert some control over an unknown future. We might ask, "Within the concept of time, is it possible that the future determines the past, rather than the past determining the future (see also Section 5.16)?" There is no scientific reason that it could not. In fact, there are two types of solutions to the Schrödinger equation, the "retarded" solutions and the "advanced" solutions. The retarded solutions describe future events as being the result of past events. The advanced solutions describe past events as following from future events. Both types of solutions arise because all microscopic physical laws are just as valid in the reversed as in the forward time direction. However, in practice, the advanced solutions are always discarded as being "nonphysical" because to use them we would first need some knowledge of future events, and with them we could only predict the past, which is already known. Nevertheless, this leaves unanswered the philosophical questions, does the future determine the past, or does the past determine the future, or is it all determined or undetermined? Of course, such questions lose their urgency when it is realized that time itself is only a concept.

Even if there is no law of causality, events do not necessarily happen randomly. It only means that they happen causelessly. Randomness implies absence of a pattern, whereas causelessness merely implies the absence of a cause for the pattern. By examining the manifestation, we can discern temporal and spatial patterns of events but we cannot discern a cause, since any pattern can happen causelessly. Buddhist meditation (see Sections 14.6, 24.2) helps us to become aware of the pattern but not of any cause for the pattern. The concept of causality is a correlate of the concept of objective reality, and the falsity of the latter implies the falsity of the former (see next section).

12.4. The nature of laws

In addition to the "law" of karma, there are commonly supposed to be at least three other kinds of laws:

a) Laws of God. These depend on how God is defined. If God is a word for the Unmanifest (Noumenon, see Section 9.3), then God transcends all laws because the Unmanifest transcends all concepts. Thus, there are no such laws of God. If God is a word for Consciousness, i.e., all that is (Section 10.1), then the laws of God encompass everything that happens, whether conceivable or unconceivable, predictable or unpredictable. While Ramesh uses the concept of “Will of God”, or “Cosmic Law” (see next section), there is no God that is separate from us or any other thing.

b) Laws of nature. These are the laws that scientists seek to "discover". They are mathematical descriptions (concepts) of selected patterns of regularity that are observed in the manifest world. Consequently, as the observations change and become more refined, so do the laws.

c) Laws of man. These are rules of behavior that are conceptualized by society in order to create and maintain order, and to preserve the existing power structure.

As we have seen in the previous section, the law of causality is only a concept. Now we see that all laws are nothing but concepts. If laws really existed apart from concepts, they would be part of objective reality. But we have seen that objective reality can never be shown to exist (see Section 1.1), and indeed its hypothesis produces paradoxes in the interpretation of quantum theory (see Sections 6.9 and 6.10). Furthermore, whether or not an objective reality exists, our observations are the same (see Section 6.10). Thus, we can safely assume that laws are creations of the mind rather than properties of Reality.

12.5. The concepts of destiny and God's will

The Libet experiments (see Section 5.9) showed that, in objective time, the urge to raise a finger is predetermined 100 ms to 1000 ms before awareness of the urge. The brain imaging experiments of Soon, Brass, Heinze, and Haynes (see Section 5.10) showed that the urge to make a left-right button-push is made in the brain up to 10 s before awareness of the urge. Logical reasoning shows that we have no more free will to react than a thermostat (see Section 5.11). Thus, it seems that we have no control over our actions. This concept of no free will is similar to the concept of destiny, which states that everything that happens to us is determined outside of time. It is different from the concept of determinism because destiny is not a result of deterministic laws operating in the past to determine the present and future. The concept of destiny does not require any laws at all, nor does it require the concepts of past and future.

Ramesh sometimes suggests that Consciousness determines present events in order to bring about a specific future result. For example, if a sage (or anybody else) is needed in the future, Consciousness arranges for a body-mind to be born with the required genes at an appropriate time in the past, and raised with the required conditioning, to produce the future sage (or future somebody). This is similar to the concept that the future determines the past and present as was suggested in Section 12.3, i.e., that the present is postdetermined by the future instead of being predetermined by the past.

The concept of "I" as thinker and doer cannot explain certain mysteries. Many people have wondered what made them make past choices that seemed so innocent or accidental at the time but which led to rather remarkable coincidences later. Almost everybody has wondered how seemingly unconnected events conspired to produce felicitous convergences or synchronicities at later times. Both situations suggest the concept of destiny, and the wonderment that they inspire represents the mind beginning to lose some of its grip on its concept of how the world "should" operate, thus allowing the intuition to reveal something totally new.

In the January 2006 issue of the Advaita Fellowship newsletter, Wayne Liquorman (one of Ramesh's first enlightened students, and now also a teacher) says of this matter:

"The process that's happening in this Advaita is one of inquiry and examination; whereby you gain insight by looking at your own experiences. In the course of life, experiences happen. The question is, what was your part in bringing those experiences into being?

“If you look back over your life you will see that people you never knew existed suddenly entered your life and brought with them enormous life changes. They might have been lovers, teachers, enemies or gurus. How could you have brought them into your life, if you didn't even know that they were alive?

“Perhaps by looking at your history you will see that events happened in your life that were part of a much larger happening than what you could possibly create with your own physical being. If you can look at your own experience and your own background, you may begin to see that your present state is a product of huge forces outside of your egoic control. This teaching simply directs your attention to look. Insight follows or it does not.

“Clearly, if you were in charge - if any of us were in charge and capable of creating our own realities - we'd all be saints! We'd be loving and kind and generous all the time, because when we're loving and kind and generous, we feel better, everybody around us feels better, and this translates into a better life. The fact that, despite our best intentions and our most earnest observations and efforts, we're still filled with positive and negative qualities seems to suggest a certain lack of control on the part of the organism.

“If you look, and you are blessed to be able see the vast universal forces that were operative in creating who you are today, then guilt eases naturally, on its own. You don't have to make any efforts to reduce it; it simply dissipates in the seeing, as you understand that who you are and what you are is a function of the Universe. Both your finer qualities and those qualities that you and others might not like are part of this mixed bag that constitutes every human being."

The concept of destiny (what Ramesh also calls "God's Will" or "Cosmic Law") is equivalent to the concept that everything happens completely spontaneously (causelessly). The latter is easily verified merely by watching to see that all thoughts appear out of nowhere, including any thought or urge to choose or to do (see Chapter 23). When Ramesh uses the term God’s will as an equivalent to the concept of destiny, he means God as Consciousness or Totality, not as an entity. The purpose of the concept of God’s will is to function as a power symbol that can undermine the concepts of the ego and the individual doer. The concept of a chain of causality is unnecessary if it is replaced by the concept that God's will is all there is.

When we realize that "we" have no control, there is a sense of freedom and energy because control is bondage even if we think "we" are the ones in control. This freedom brings with it the awareness of a power that is mysterious and profound, the power of Consciousness (God). Ironically, if "we" try to use that power, it disappears. This is a twist on the saying, "use it or lose it". Instead, it becomes, "if you try to use it, you will lose it". If "we" toy with the power of God, "we" will get burned by disappointment and disillusion, but when we realize that "we" have no control, the power of God, even though subtle, becomes awesomely apparent.

Some people are afraid that the concept of destiny would lead to a sense of fatalism. Fatalism implies that we know, or think we know, what the future will bring. This could result in a sense of resignation and inaction. However, in the concept of destiny, the future is uncaused and unknown, and this can bring a sense of curiosity, anticipation, and excitement. Other people have difficulty accepting the concept that the manifestation is not caused but just happens spontaneously. This difficulty arises from an unquestioning attachment to the concept of causality, which requires an identifiable cause for everything that happens. However, an attempt to preserve causality by proposing some entity, such as a god, that causes everything to happen solves nothing because it merely provokes the question, what caused the entity? This leads to an infinite regression of causes unless it is terminated by a causeless cause, or unmoved mover, which again is equivalent to a spontaneous happening.

The unstated question behind the question, “Why is there not a god or entity who is willing or otherwise determining what happens?” is "Should 'I' be afraid of this god?" The answer is the counter-question, “Who is the 'I' that is asking the question?” This now becomes an exercise in inquiry. When the “I” is investigated, it becomes clear that it does not exist. Thereupon, all such questions disappear. Still another answer is the realization that the existence of such a god or entity can never be verified, which is evidence that it is nothing but an empty concept.

The whole purpose of introducing concepts (thorns, see Section 13.6) such as spontaneous (causeless) happening, destiny, or God’s will, is to help make clear that there is no such thing as a doer (the original thorn). To show directly that there is no doer, we shall use the disidentification practices discussed in Chapters 20, 22, 23, 24.

12.6. We are already here now

In the state of spiritual ignorance, which is the state of apparent boundaries and separation, the conceptual present is simply the boundary between the conceptual past and future, and cannot be perceived as such. Perception can see only change and nothing but change. This is the temporal aspect of phenomenality. However, pure Awareness, which is What-we-are, is timeless, i.e., absent of time. This intemporality is sometimes called the eternal present moment. After awakening, it is seen directly that temporality (change) is only conceptual, not real.

Even in spiritual ignorance, it is easy to see that change can be perceived only because time occurs within timelessness. The motion of a uniformly flowing stream can only be seen from its banks because an object flowing with the stream sees no motion (change) of the water next to it. We can see change because we perceive it from a background of changelessness. This is direct evidence that our awareness is pure Awareness. We are nonlocal universal Consciousness, not individual mind.

Similarly, we can perceive space because we are spacelessness. We can see objects because we perceive them from a background of objectlessness. This applies to any object, even to thoughts, feelings, emotions, and sensations. For example, we can feel pain because we are painlessness, and we can perceive a thought because we are the absence of thought.

12.7. Maya, the divine hypnosis

Maya is a Hindu concept that attempts to explain why we believe that the waking dream (see Section 13.1) is real. Maya originally denoted the power of wizardry with which a god can make human beings believe in what turns out to be an illusion. By extension it later came to mean the powerful force that creates the cosmic illusion that the phenomenal world is real. (Ramesh uses the term “divine hypnosis” to mean the same thing.) Of course, Maya is just a concept that purports to explain the apparent reality of other concepts. As we saw in Section 9.4, objective reality is a result of the process of objectification, which is conceptualization (see Section 9.2) plus identification (see Section 11.4). This means that no objects, entities, or physical laws have any reality in themselves. Their seeming reality stems from the reality of Consciousness. The subtlety of Maya becomes evident when we examine why we believe the world is real. We believe objects are real because we do not see the underlying Awareness from which they arise and of which they consist (see Section 23.3). Then, we believe the law of causality and other physical laws because we believe that we are separate entities and we want the power to satisfy our desires.

Chapter 13. Some useful metaphors

In discussing the metaphysics of the manifestation, it is very helpful to our understanding to use analogies taken from every day life. This is because the Source of the manifestation cannot be described in conceptual terms. It can only be pointed to, and analogies are useful pointers.

13.1 The dream

In the meditation for July 28 of *A Net of Jewels* (1996), Ramesh says,

> "In comparison with the inconceivable Infinity that we actually are, what we think we are is a mere hallucination, an illusory and insubstantial shadow."

In the meditation for August 19, he says,

> "You dream that you are awake, you dream that you are asleep - and you do not realize you are dreaming because you are still in the dream! Indeed, when you do realize that this is all a dream, you will have already awakened."

In the meditation for November 17, he says,

> "You might see the whole universe as a dream, but so long as there is still a you (a separate entity) seeing this dream, you will continue to remain confused."

On p. 484 of *I Am That* (1984), Nisargadatta Maharaj says:

> "The world is but the surface of the mind, and the mind is infinite. What we call thoughts are just ripples in the mind. When the mind is quiet, it reflects reality. When it is motionless through and through, it dissolves and only reality remains. This reality is so concrete, so actual, so much more tangible than mind and matter, that compared to it

> even a diamond is soft like butter. This overwhelming actuality makes the world dream-like, misty, irrelevant."

We are all familiar with the basic characteristics of our sleeping dreams. Prior to the beginning of the dream, there is deep sleep with its absence of consciousness. The dream then bursts forth in full flower, with people, landscapes, buildings, airplanes; an entire world is created in an instant. During the course of the dream, which may last only a few seconds or minutes, people may appear and vanish or die, buildings may arise and crumble or burn, and oceans may form and reform or disappear. Dramas of every imaginable type may play out, including those with beauty, love, murder, hatred, terror, and lust. However, every dream invariably has one principal figure, that of some representation of the "I". The form of this representation may be different in every respect from the waking "I", but, on awakening, it is immediately clear which figure represented the "I" and which ones did not.

The manifestation, or waking dream, is similar in many respects to the sleeping dream. Since objectivity cannot exist without Subjectivity, the universe cannot exist without sentience to observe it, just as the sleeping dream cannot appear without containing within it an observer to observe it. When the universe appears, it appears in its present entirety, without the need for eons of evolution prior to the arising of sentience. Indeed, it cannot even appear without the sentient objects that are part of it. It is illusory in the sense that awakening (enlightenment) shows that it is not real, but is merely a reflection or shadow of the only Reality, which is Awareness. It is an epiphenomenon of Awareness, is totally dependent on it, and has no separate existence.

The sage views the world as a lucid dreamer views his or her dream. Both see that the dream is not real. However, the sage witnesses from pure impersonal Awareness while the lucid dreamer still thinks of him/her self as the dreamer. Also, the sage does not attempt to control the world but the lucid dreamer usually is quite interested in controlling the dream.

Questions: When you are dreaming, does it seem more or less real than when you are awake? Have you ever had lucid dreams? Did you try to control them?

In the waking dream as in the sleeping dream, all apparently separate individuals are merely dream figures, without any volition or free will of their own. A dream figure simply is being dreamed, and lacks entirely any independent reality. We usually think of ourselves as being the dreamer of the sleeping dream, but that is incorrect. There is no dreamer of either the sleeping dream or the waking dream. Both the waking dream and the sleeping dream are mere arisings in Awareness. Because of this, it is misleading to think of Awareness as the dreamer since Awareness is not an entity or object. When the individual regards him/her self to be real, it is a case of mistaken identity. Our true identity is Awareness. This becomes apparent upon investigating the dream (see Chapter 23). During this investigation, it becomes obvious that the dream was never real, the only reality having been only Awareness.

13.2 The movie

On p. 234 of *I Am That* (1984), Nisargadatta Maharaj says,

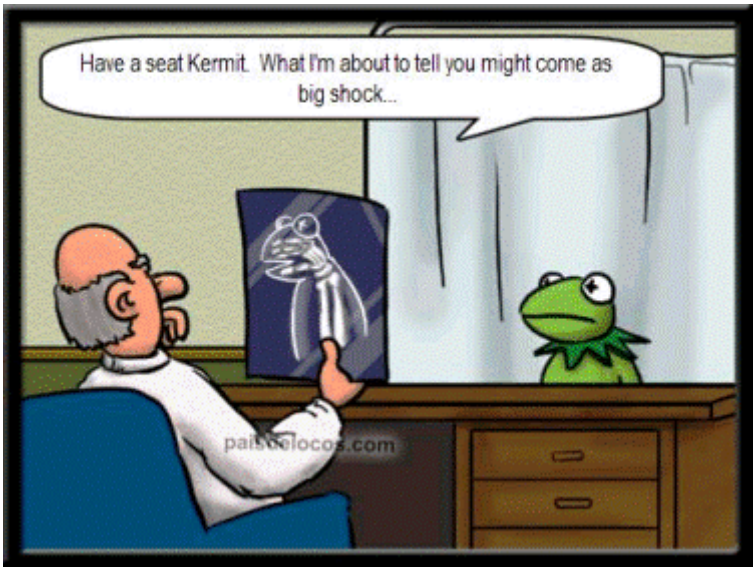
> "In reality nothing happens. Onto the screen of the mind destiny forever projects its pictures, memories of former projections and thus illusion constantly renews itself. The pictures come and go -- light intercepted by ignorance. See the light and disregard the picture."

In some ways, the movie metaphor strikes more deeply at the illusoriness of the manifestation, and therefore may be better than the dream metaphor at producing the shock necessary to induce awakening.

We as individuals are nothing but the figures on a movie screen. We have no more reality, independence, or volition than the images projected onto the screen. Everything we seemingly think, feel, or do is actually recorded on the film through which the Light of Awareness shines and projects the images onto the screen of Awareness. The absurdity of our situation is made clear at the thought that a mere image on a screen can strive for success, yearn for fulfillment, or seek for its source! Yet, all this seems to happen, not because the images are doing it, but because it is all recorded on the film! The film is the analog of Plato's or Goswami's transcendental realm (Section 7.1) (both of which are unverifiable concepts), and the light and the screen are the analogs of our true nature, which is pure Awareness. The light and the screen are completely unaffected by the film and the images. The images appear from nowhere, do their dance, and disappear back into nowhere, leaving no trace. (The viewer is analogous to the individual mind.)

13.3. The puppet and the robot

This metaphor is similar to that of the movie. The body-mind organism is nothing but a puppet which moves according to the way its strings are pulled (e.g., by thoughts and impulses that appear from nowhere) and according to its mechanical construction (its conditioning). A more contemporary version would be the robot that performs a task according to instructions that are fed to it and according to its programming. Neither the puppet nor the robot can initiate any thoughts or actions of its own. There is no need to be depressed by this because we are not the body-mind organism; we are the Awareness of the body-mind organism.



13.4. The shadow

In the meditation for August 4 of *A Net of Jewels* (1996), Ramesh says,

> "The phenomenal world is like a shadow which cannot exist without an object to cast it. It is dependent on something else for its existence. In this sense the phenomenal world is unreal, as it is a reflection of the noumenon."

When an object casts a shadow, the shadow is nothing but a poor facsimile of the object. It can be nothing else. As individuals, we are like shadows of Awareness, which is our true nature.

13.5. The ocean

An extremely useful metaphor to help us picture the relationship between phenomena (arisings in Awareness) and Noumenon (Awareness) is that of the waves on the surface of the ocean. Waves (phenomena) cannot exist without the ocean (Noumenon). The ocean in its depths is quiet, peaceful and undisturbed. Waves, storms, and foaming surf arise on the surface without disturbing the depths. Likewise, Noumenon is totally undisturbed by the frenzied and meaningless activity of phenomena. Each wave consists of a crest and a trough. One cannot appear without the other, just as all of the inseparable opposites of phenomena must appear together. When the ocean (Noumenon) identifies with a wave and the wave thinks of itself as being separate from the other waves and from the ocean itself, the illusory individual appears. This is spiritual ignorance. When identification ends and awakening occurs, it is clear that there is only the ocean (Noumenon), there has always been only the ocean, and we are the ocean.

Exercise: Whenever you are suffering, become the ocean instead of the wave. What is your experience now?

13.6. The thorns

If a thorn enters the foot (identification with the sense of personal doership occurs), another thorn (concept) can be used to remove it. The thorn must be pointed and sharp and it must be deftly used in order to be effective. A dull thorn aimed at the wrong spot will only mutilate the foot. A thorn that has been softened so that it will not hurt will be ineffective. A collection of a large number of thorns will only confuse and distract, especially if the attention is on collecting thorns rather than using the best one to remove the one imbedded in the foot. The thorns themselves are not Reality, so after the first thorn is removed, both thorns are thrown away. We cannot describe Reality by using concepts, but we can use concepts to remove false concepts and to point to Reality. When Reality is revealed, all pointers to Reality become irrelevant, and can be thrown away.

13.7. Electricity and the appliance

An electrical appliance (a human body) is an inert object that comes to "life" when electricity (Awareness) identifies with it and Presence becomes present. In the absence of the electricity, the appliance is "dead".

A variant of this metaphor is that a fan continues to turn for a time even after the electricity has been turned off, meaning that fear/desire and their derivatives may continue for a time after awakening but they cause no suffering because there is no identification with them (“There is a difference between Awakening and Deliverance: The former is sudden, thereafter deliverance is gradual”---Wei Wu Wei in “*Posthumous Pieces*”, Chapter 40).

13.8. The gold object

The gold in a bracelet is the same as the gold in a ring. Only the form is different. If the bracelet and ring are melted down, the forms change, but we still have the gold, which is unchanged. The gold is the analog of pure Awareness, while the forms of the bracelet and ring are the analog of arisings in Awareness.

13.9. The dust in a light beam

A light beam is invisible unless it strikes something that reflects it. Awareness (the light beam) perceives Itself by reflecting from the manifestation (the dust), which is also Itself. Without the manifestation (us), Awareness would not know itself. Awareness sees its own light reflected from Itself and is thereby aware of Itself.

13.10. The mirror

An ideal mirror (pure Awareness) is invisible and reflects images (the manifestation) without distortion and without being affected by them. Thus, it reflects Reality truly. A distorted mirror (the mind) reflects distorted images. Thus, it reflects Reality as if It were distorted by separation. Without a mirror there are no images, and without images, the presence of the mirror is less apparent.

13.11. The snake and the rope

In dim light (ignorance), a rope (the manifestation) can be mistakenly perceived as a snake (the world of separation), and fear can result. When a bright light (Awareness) is turned on, the rope will be seen for what it is (nothing but Awareness itself). This metaphor can also be used to refer to the ego (as the snake), which is seen to be nothing but Awareness (the rope) after awakening.

A variant of this metaphor is to see the ego as the rope itself (no snake). During the steps to awakening, the rope is burned in the fire of Awareness. After awakening, only the burned rope remains. The ego-thought still arises but has no power to bind anyone, or to tie anybody up. The powerless ego-thought is used by Awareness for communication with other organisms. When the sage says "I", he/she is referring to this thought

13.12. The mirage

In the meditation for April 9 of *A Net of Jewels* (1996), Ramesh says,

> "We speak of diversity in the manifest world as of water in a mirage. Time, space and duality itself are all notions or concepts--mere thoughts. All is nothing but Consciousness appearing as mind, whether mountains, oceans, rivers, animals or human beings."

A desert mirage (the manifestation) as seen from a distance (from ignorance) appears to be water, but up close (after awakening), is seen to be a reflection of the sunlight (Awareness).

13.13. The pot and the space in which it exists

The space (Awareness) in which a pot (the world) exists is unaffected by the pot. The same space exists outside, inside, and within (is immanent in) the walls of the pot. When the pot is broken (when awakening occurs), the space inside and within is seen to be the same as the space outside. A slight variation of this metaphor makes the inner space the mind, the outer space Awareness, with the mind merging with Awareness at awakening.

13.14. Sunlight and the dew drop

Sunlight (pure Awareness) is reflected in a dew drop (the human being) as pure Presence. By concentrating on the feeling of pure Presence, we are led to our true nature as pure Awareness.

Chapter 14. Religion, belief, and nonduality,

14.1. The difference between religion and nonduality

In the meditation for April 30 of *A Net of Jewels* (1996), Ramesh says,

> "Religions were originally based on direct or absolute Truth. In the course of time they degenerated into concepts. And on these concepts has been erected gradually an

> enormous, amorphous structure enchanting enough to attract and mislead millions of people."

Because suffering is often grounded in deep-seated religious beliefs (Section 11.8), such suffering will not end until these beliefs are deeply questioned. However, because there are no doers (see Section 11.4), nobody has any choice about what he/she believes, or about whether or not to question them. If questioning happens, it happens. If not, it doesn't. Nevertheless, in this chapter (and for much of the course), for the purpose of ease in communication, we shall use the active (doer) mode of speaking instead of the more accurate passive (nondoer) mode.

Question: Have you suffered as a result of religious teachings?

Religion can be defined as a belief system plus a power structure to enforce the belief system. The power structure can be overt, as in a conventional religion, or it can be a subtle pressure from a group to conform. Within this definition, the Western culture of individual identity and striving is a religion, politics is a religion, science is a religion, materialism is a religion, medicine is a religion, idealism is a religion, even Advaita can be a religion. Whenever we try to correct somebody's belief, we are acting as the thought police to enforce a belief system. When there is no "we" to do anything, a response to a belief may arise but it will never be separative because it will come from the absence of separation.

This is a course in seeing and understanding, not in belief. In nonduality, Reality transcends all concepts, so Reality cannot be conceptualized. Nonduality as a teaching contains many concepts, but all of them are meant to be pointers to Reality that can be verified by experience. To mistakenly believe the concepts as Reality Itself would actually prevent one from realizing Reality. In the end, the only validity of any concepts is in their usefulness in bringing about awakening and the end of suffering.

Question: Why can't belief bring you to Reality?

On p. 109 of *The Wisdom of Nisargadatta* (1992) by Robert Powell, Nisargadatta says:

> "By following any religion, cult or creed, one becomes inevitably conditioned, because one is obliged to conform and accept its disciplines, both physical and mental. One may get a little peace for some time, but such a peace will not last long. In your true nature, you are the knower of concepts and therefore prior to them."

On p. 65 of the same book, Nisargadatta says:

> "Those who know only scriptures know nothing. To know is to *be*."

In the meditation for August 25 in *A Net of Jewels* (1996), Ramesh says,

> "Belief, any belief, is based on the sense of insecurity. Only when all belief is given up are you free to know yourself. In self discovery what you find is the Truth - that Truth which is total, self-evident and which needs no outside support or justification."

There is an enormous difference between the teachings of nonduality and those of religion. There is no theology in nonduality, whereas theology is the basis of all religion. A theology is a dualistic belief system which contains critical concepts that one is asked to believe as Truth but which cannot be verified within the individual's own experience. The teaching of nonduality differs from religion by heavily relying on practices (see Chapters 22, 23, 24, 25) that are aimed at revealing your true nature in a way that mere concepts cannot. Without the practices, nonduality is nothing but metaphysics.

The world's scriptures can be interpreted in many different ways. At one extreme are the fundamentalist interpretations, which assume that the words are literal truth. These interpretations are necessarily dualistic because all words taken literally are dualistic (see Section 11.1), and they always conceive of God and humans as separate beings. Examples of scriptures that are interpreted literally by fundamentalists are the Hebrew and Christian Bibles. At the other extreme are the nondualistic interpretations, which regard the words as nothing but pointers to Reality. An example of a scripture that is most naturally interpreted nondualistically is the *Ashtavakra Gita.* (See, e.g., a highly regarded translation without commentary called *The Heart of Awareness* by John Richards, available at http://www.realization.org/page/doc0/doc0004.htm. A translation with commentary, entitled *Duet of One* (1989), was authored by Ramesh Balsekar, see Appendix). A scripture that lends itself in some parts to a dualistic interpretation and in other parts to a nondualistic interpretation is the *Bhagavad Gita* (http://www.bhagavad-gita.us).

14.2. Religion as the belief in a dualistic god

In the meditation for August 28 of *A Net of Jewels* (1996), Ramesh says,

> "When a person finds that his own efforts are fruitless, then he turns to a power, he creates a power, conceives a power which will give him what he himself cannot get. He creates a concept, worships it, prays to it and begs it to give him what he wants. When even that entity fails to give him what he is seeking, further frustration and misery arise."

In religion, mankind creates its gods in its own images, and each religion then justifies its actions by claiming it speaks for its god. The more vengeful and punitive is the god, the more vengeful and punitive are the people who created it and who believe in it. Furthermore, if we think of God as being separate from us, we will not be able to avoid asking such questions as, "Why did God create suffering?" or, "Why is God doing this to me?" Thus, many adherents to Christianity are described as being God-fearing, not God-loving. Any belief in a separate god induces guilt, expiation of which often takes the form of trying to induce guilt in others. It is no accident that the most peaceful religions are the ones, like Buddhism, that have no concept of god.

Questions: Have you ever asked the question, "Why did God create suffering?" or, "Why is God doing this to me?"

Religions often preach love without knowing what Love is (see Chapters 16 and 25). Many religious fundamentalists interpret their god's love for them to be inseparable from its hatred for others. The U.S. political movement known as the Christian religious right is one such group (see http://en.wikipedia.org/wiki/Christian_right). Its primary spokesmen are Robert Grant, Pat

Robertson, John Hagee, Rod Parsley, Franklin Graham, James Dobson, and Jerry Falwell (deceased 2007).

The scientific paradigm (see Section 2.1) has produced the theory of biological evolution. Since God is unnecessary in this theory, fundamentalist Christians are attempting to impose an antievolutionary doctrine on the educational systems in several States in the U.S. This doctrine takes two forms, creationism and intelligent design. Both doctrines are derived from Biblical stories of a universe created by God, and as such, require a belief in a dualistic God (see http://www.talkorigins.org/).

Fundamentalists often create enemies on whom to displace their feelings of self-punishment, self-fear, and self-hatred (see Section 11.8). Their (unrecognized) self-punishment can be so unbearable that they try to compensate by believing that they are god's favored few, and, in the name of this god, endeavor to eliminate a competing religion by trying to convert, demonize, or kill its adherents. Their fear of another religion or teaching can be even greater than their fear of death.

The belief that God has sanctioned violence leads to additional violence, not only among believers, but also among nonbelievers. (The daily news contains ample evidence that this is so.) Scientifically, this has been demonstrated by having a group of 500 students read a passage depicting violence in the Old Testament. Half of the students also read another passage saying that God commanded that the evil-doers be chastened. The half reading the additional passage were more likely to act aggressively in a later exercise, whether they were believers or not (*Nature* 446, 114-115 (8 March 2007)).

Following are a few examples of violent clashes between competing religious beliefs that resulted in executions, massacres, and wars:

- In less than a century after Mohammed (570-633) died, Muslims, in their missionary zeal to convert the "infidels", conquered Palestine, Syria, Mesopotamia, Egypt, North Africa, and the South of Spain. In the eighth and ninth centuries they conquered Persia, Afghanistan, and a large part of India, and in the twelfth century they had already become the absolute masters of all Western Asia, Spain and North Africa, and Sicily.
- Between 1095 and 1270, with the blessing of the popes, and with the intention of protecting the Holy Land and keeping the pilgrim routes open to Jerusalem, Christians launched several crusades, mostly from France, slaughtering hundreds of thousands of Muslims.
- In 1478, Pope Sixtus IV initiated the Spanish Inquisition in order to purify Christian communities of all Jews and Muslims, even those who had converted to Christianity. This quickly became an instrument to expand state power and to fill its treasury with the estates of those found guilty of being less than fully Christian.
- In 1517, Martin Luther (1483-1546) in Wittenberg, Germany, repulsed by papal authority and its practice of buying and selling indulgences (the remission of religious penalties for sinning, including freeing the soul from purgatory) rebelled by posting his "Ninety-five Theses" on the door of the Wittenberg Castle church. Simultaneously, he called upon lay people to take responsibility for their own salvation and to renounce Roman authority.
- In Switzerland in 1523-1524, peasants in the Zurich district, using the argument that ruling

authority should be based on the Scriptures, revolted against the town council, claiming that they should not be required to pay tithes on their produce because there was no biblical justification for doing so. Townsmen, with their own interpretation of the Bible, rejected the peasants' demand, noting that the Bible did not forbid such payments, and said that the peasants should make them out of "love". This so provoked the peasants that the revolt grew to hundreds of thousands in several countries. In 1525, territorial princes and large cities reacted by raising large armies that defeated and destroyed the revolt.

- In 1535, in Münster, Germany, believing that protection of "true" religion demanded harsh measures, Protestants, allied with the Catholic Church, persecuted and executed thousands of Anababtists (a sect that believed only adults should be baptized, founded in 1525 by Konrad Grebel, Balthasar Hubmaier, and others, and from whom the Baptists, Amish, Mennonites, Quakers, and Hutterites of today are descended).
- Between 1550 and 1650, about 100,000 people in Europe, mostly women, were persecuted for alleged witchcraft, and about 60,000 were executed. Under torture, or the threat of torture, many confessions were obtained, but no proof that an accused person ever attended a Devil-worshipping "black" Sabbath was ever produced in any witch trial.
- From 1618 to 1648, the Thirty Years' War was fought between Protestant and Catholic states in the Holy Roman Empire (comprised largely of present-day Germany, Austria, and the Czech Republic) with considerable opportunistic meddling by surrounding countries. The war ended with the Peace of Westphalia (1648), which required that all subjects follow their rulers' faiths.
- Many Christians willingly joined the Nazis in trying to exterminate the Jews during World War II. Islamic fundamentalists have declared holy war on "infidel" nations, particularly on the powerful ones. Muslims, Jews, and Christians continue to kill each other today.
- On September 11, 2001, perceiving the U.S. to be anti-Islamic because of its support for the presumed anti-Islamic policies of Israel and other countries, Osama Bin Laden, an Islamic extremist headquartered in Afghanistan, directed coordinated suicide attacks by fanatical Muslims on the World Trade Center in New York City and on the Pentagon near Washington, D.C., killing nearly 3000 people. These attacks inspired the following exchange on September 13, 2001 between Jerry Falwell and Pat Robertson (see above) on Pat Robertson’s cable television program, "The 700 Club" (as reported by various websites):

  Falwell: "What we saw on Tuesday, as terrible as it is, could be miniscule if, in fact, God continues to lift the curtain and allow the enemies of America to give us probably what we deserve."
  Robertson: "Well, Jerry, that's my feeling. I think we've just seen the antechamber to terror, we haven't begun to see what they can do to the major population."
  Falwell: "The ACLU has got to take a lot of blame for this. And I know I'll hear from them for this, but throwing God...successfully with the help of the federal court system...throwing God out of the public square, out of the schools, the abortionists have got to bear some burden for this because God will not be mocked and when we destroy 40 million little innocent babies, we make God mad...I really believe that the pagans and the abortionists and the feminists and the gays and the lesbians who are actively trying to make that an alternative lifestyle, the ACLU, People for the American Way, all of them who try to secularize America...I point the thing in their face and say you helped this happen."
  Robertson: "I totally concur, and the problem is we've adopted that agenda at the highest

levels of our government, and so we're responsible as a free society for what the top people do, and the top people, of course, is the court system."
Falwell: "Pat, did you notice yesterday that the ACLU and all the Christ-haters, the People for the American Way, NOW, etc., were totally disregarded by the Democrats and the Republicans in both houses of Congress, as they went out on the steps and and called out to God in prayer and sang 'God bless America' and said, let the ACLU be hanged. In other words, when the nation is on its knees, the only normal and natural and spiritual thing to do is what we ought to be doing all the time, calling on God."

- In late August 2005, hurricane Katrina devastated the Gulf Coast of the U.S. and caused more than 1300 confirmed deaths. On September 1, 2005, Pat Robertson (see above) proclaimed on "the 700 Club" that "New Orleans asked for this tragedy by advertising itself as a destination for jazz music. As every Christian knows, jazz music is sinful and lures people into eternal damnation. The connection is obvious" (from http://datelinehollywood.com/archives/2005/09/18/pat-roberston-corrects-dateline-hollywood-article/). Reverend Franklin Graham (see above), son of Reverend Billy Graham, suggests the city was targeted because of the city's sinful reputation. At a speech in Virginia, he said, "This is one wicked city, OK? It's known for Mardi Gras, for Satan worship. It's known for sex perversion. It's known for every type of drugs and alcohol and the orgies and all of these things that go on down there in New Orleans." Reverend Graham continued, "There's been a black spiritual cloud over New Orleans for years. They believe God is going to use that storm to bring revival" (from http://www.msnbc.msn.com/id/9600878/).
- As a result of the U.S. invasion of Iraq in 2003 and the removal of Saddam Hussein as dictator, Shiite Muslims waged civil war against Sunni Muslims in revenge for the atrocities committed by the Sunnis under the leadership of Hussein.
- In *Silent No More* (2005), Rod Parsley (see above) says, "I cannot tell you how important it is that we understand the true nature of Islam, that we see it for what it really is. In fact, I will tell you this: I do not believe our country can truly fulfill its divine purpose until we understand our historical conflict with Islam. I know that this statement sounds extreme, but I do not shrink from its implications. The fact is that America was founded, in part, with the intention of seeing this false religion destroyed, and I believe September 11, 2001, was a generational call to arms that we can no longer ignore."
- In *Jerusalem Countdown* (2006), John Hagee (see above) says, "The final battle for Jerusalem is about to begin. Every day in the media you are watching the gathering storm over the State of Israel. The winds of war are once again about to sweep through the sacred city of Jerusalem. The world is about to discover the power of the God of Abraham, Isaac, and Jacob, the Keeper of Israel, "who ... shall neither slumber nor sleep" (Ps. 121:4). His righteous fury will be evident in the defense of Israel."

Question: What was your reaction to this list? Was it anger, sadness, depression, cynicism, indifference, acceptance, compassion?

14.3. A nondualistic view of God

On p. 61-62 of *I Am That* (1988), Nisargadatta Maharaj says,

> "When you see the world you see God. There is no seeing God apart from the world. Beyond the world to see God is to be God. The light by which you see the world, which is God, is the tiny little spark, 'I am', apparently so small, yet the first and the last in every act of knowing and loving."

On p. 200 of *Be As You Are* (1985), David Godman summarizes Ramana Maharshi's statements on God:

> "1. He is immanent and formless; he is pure being and pure consciousness.
> 2. Manifestation appears in him and through his power, but he is not its creator. God never acts, he just is. He has neither will nor desire.
> 3. Individuality is the illusion that we are not identical with God; when the illusion is dispelled, what remains is God."

Nondualistically, God is Consciousness, which is all that is. But, just as we distinguished conceptually between Noumenon and phenomenon in Chapter 9, we can now distinguish conceptually between transcendent God and immanent God. God is both transcendent and immanent. Transcendent God is Consciousness at rest (Noumenon, Awareness), while immanent God is Consciousness in motion (phenomenon, experiencing). As Noumenon is prior to phenomenon, so Awareness is prior to experiencing, and is what enables experiencing to occur. Since we know that we are aware, we can be aware that we are pure Awareness (see exercise below and Section 23.3).

Exercise: Close your eyes and rest for a few minutes. Now, consider whether or not you are aware. If you think you are not aware, who/what is it that thinks you are not aware? Look and see if you can find it. If you can find it, who/what is it that finds it? Investigate that. Is it aware? If you cannot find it, can it exist?

If you know you are aware, who/what is it that knows you are aware? Find out by inquiring, Who/What is it that is aware of Awareness, and then investigate it. If you see an object or form, inquire, Who/What is it that is aware of this object or form? Then investigate that which is aware of it. If you don't see an object or form, what can you conclude is the nature of pure Awareness?

If experiencing is not conceptualized into separate objects, it is pure Presence (see Sections 9.2, 23.4). If it is conceptualized into separate objects, Presence is the background of all objects, and objects are seen to arise out of it (see Sections 20.5, 23.5). In either case, since we know that we are aware, we can be aware that we are pure Awareness (see Section 23.3). When we feel that we are present, we can know that we are pure Presence. Awareness/Presence does not require the existence of separate objects, which seem to appear only when conceptualization begins (see Section 5.8).

Exercise: Close your eyes, go inward and downward out of the head and into the body, and

concentrate on feeling the breath. After about 10-20 minutes, see if you can sense pure Presence. If you can sense it, is it there even when there are thoughts, feelings, emotions, and body sensations? Can you sense that it is the background of all such objects?
Now open your eyes and see if you can still sense the background of Presence. If you don't sense it, why would it not be still there?

Nondualistically, God is not an entity that is separate from us, that can do something, and to which we might ascribe emotions and intentions. God is not an object or entity at all, let alone one that has emotions or intentions. God does not and cannot "do" anything, because there is nothing but God, so there is nothing separate for God to act on, to feel about, or to think about. Because there is nothing but God, I am God and You are God.

While Christianity is basically a dualistic religion, a few passages from the Bible can be interpreted nondualistically. For example, consider some often-quoted passages from *Exodus 3* (all Biblical passages were taken from the Revised Standard Version at http://quod.lib.umich.edu/r/rsv/browse.html):):

> *13: Then Moses said to God, "If I come to the people of Israel and say to them, 'The God of your fathers has sent me to you,' and they ask me, 'What is his name?' what shall I say to them?"*
> *14: God said to Moses, "I AM WHO I AM." And he said, "Say this to the people of Israel, 'I AM has sent me to you.'"*
> *15: God also said to Moses, "Say this to the people of Israel, 'The LORD, the God of your fathers, the God of Abraham, the God of Isaac, and the God of Jacob, has sent me to you': this is my name for ever, and thus I am to be remembered throughout all generations.*

Nondualistically, the name of God is "I AM". I AM points to both transcendent God and immanent God, both pure Awareness and pure Presence.

Now, a familiar passage from *Psalms 46:*

> *10: "Be still, and know that I am God. I am exalted among the nations, I am exalted in the earth!"*

By being still, we know I AM.

Now, some passages from *John 14*:

> *6: Jesus said to him, "I am the way, and the truth, and the life; no one comes to the Father, but by me.*
> *7: If you had known me, you would have known my Father also; henceforth you know him and have seen him."*

Nondualistically, realizing ourselves as pure Awareness/Presence (Figure 1, Section 10.1) is the means and the end (*the way and the truth*). If we know this, we also know the Absolute (unmanifest Consciousness, *the Father*).

8: Philip said to him, “Lord, show us the Father, and we shall be satisfied.”
9: Jesus said to him, “Have I been with you so long, and yet you do not know me, Philip? He who has seen me has seen the Father; how can you say, ‘Show us the Father’?
10: Do you not believe that I am in the Father and the Father in me? [I am in Awareness and Presence is in me.] *The words that I say to you I do not speak on my own authority; but the Father who dwells in me does his works.*

Philip wants Jesus to show him pure Awareness/Presence, but Jesus tells him again that only by knowing his own true nature, can he know pure Awareness/Presence.

16: And I will pray the Father, and he will give you another Counselor, to be with you for ever,
17: even the Spirit of truth, whom the world cannot receive, because it neither sees him nor knows him; you know him, for he dwells with you, and will be in you.

The "other *Counselor", or Holy Spirit,* is spiritual intuition (see Figure 1, Section 10.1), which few know (it cannot be seen with the body's eyes), but it can be known by all who want to know. (Spiritual intuition, not blind belief, is the true meaning of faith.)

26: But the Counselor, the Holy Spirit, whom the Father will send in my name, he will teach you all things, and bring to your remembrance all that I have said to you.
27: Peace I leave with you; my peace I give to you; not as the world gives do I give to you. Let not your hearts be troubled, neither let them be afraid.

Our own spiritual intuition will bring us to Reality and peace.

Now, three passages from *John 8*:

57: The Jews then said to him, “You are not yet fifty years old, and have you seen Abraham?”
58: Jesus said to them, “Truly, truly, I say to you, before Abraham was, I am.”
59: So they took up stones to throw at him; but Jesus hid himself, and went out of the temple.

Jesus tells them that his true identity has always been pure Awareness/Presence (as it is for everyone). (This assertion incited an all-too common reaction among those who fear having their beliefs challenged.)

Jesus’ identification with pure Awareness/Presence (again with the reaction of those who were afraid to question what they had been taught) is reinforced in the following passages from *John 10*:

30: I and the Father are one."
31: The Jews took up stones again to stone him.
32: Jesus answered them, "I have shown you many good works from the Father; for which of these do you stone me?"

33: The Jews answered him, "It is not for a good work that we stone you but for blasphemy; because you, being a man, make yourself God."
34: Jesus answered them, "Is it not written in your law, `I said, you are gods'?
35: If he called them gods to whom the word of God came (and scripture cannot be broken),
36: do you say of him whom the Father consecrated and sent into the world, `You are blaspheming,' because I said, `I am the Son of God'?
37: If I am not doing the works of my Father, then do not believe me;
38: but if I do them, even though you do not believe me, believe the works, that you may know and understand that the Father is in me and I am in the Father."
39: Again they tried to arrest him, but he escaped from their hands.

14.4. Religion as the belief in objective reality

An even more universally held religion than the belief in god is the belief in objective reality. This belief can be just as staunchly and vociferously defended as the belief in any god. The religion of objective reality contains an ideology that is every bit as dualistic and as unverifiable as any other religion. It is dualistic, because it decrees the presence of objects whose existence is independent of the observer. It is unverifiable since all objects, whether perceived or not, are nothing but concepts in the mind (see Section 9.2). In fact, the only nonconceptual, verifiable experience that we can have is that we are aware (see Sections 1.5 and 9.3). Because the belief in the independent existence of any object, whether it is god, nature, or human, always implies a threat to the security of the ego and the body-mind, all religiously held dualistic beliefs, including the religion of objective reality, must lead to suffering.

14.5. Buddhism—religion, or not?

Buddhism is generally viewed as one of the world's great religions. Because, like Jesus, the Buddha left no writings, what he actually taught is open to speculation. However, a generally accepted account is given in the following three paragraphs taken from http://www.buddhanet.net/e-learning/buddhistworld/buddha.htm:

> Siddhartha Gautama, known as the Buddha, was born in the sixth century BC in what is now modern Nepal. His father, Suddhodana, was the ruler of the Sakya people and Siddhartha grew up living the extravagant life of a young prince. According to custom, he married at the young age of sixteen to a girl named Yasodhara. His father had ordered that he live a life of total seclusion, but one day Siddhartha ventured out into the world and was confronted with the reality of the inevitable suffering of life. The next day, at the age of twenty-nine, he left his kingdom and newborn son to lead an ascetic life and determine a way to relieve universal suffering.
>
> For six years, Siddhartha submitted himself to rigorous ascetic practices, studying and following different methods of meditation with various religious teachers. But he was never fully satisfied. One day, however, he was offered a bowl of rice from a young girl and he accepted it. In that moment, he realized that physical austerities were not the means to achieve liberation. From then on, he encouraged people to follow a path of balance rather than extremism. He called this The Middle Way.

> That night Siddhartha sat under the Bodhi tree, and meditated until dawn. He purified his mind of all defilements and attained enlightenment at the age of thirty-five, thus earning the title Buddha, or “Enlightened One”. For the remainder of his eighty years, the Buddha preached the Dharma [a set of teachings, most of which can be interpreted as pointers] in an effort to help other sentient beings reach enlightenment.

According to *What the Buddha Taught* (1974) by Walpola Rahula (an excellent summary of the teaching of the Buddha without the religious intrusions of later authors), faith and belief played no part in the Buddha’s original teachings. In that view, we would consider Buddhism to be a teaching, not a religion (see Section 1.5). Rahula says on p. 8 of his book,

> “Almost all religions are built on faith—rather ‘blind’ faith it would seem. But in Buddhism emphasis is laid on ‘seeing’, knowing, understanding, and not on faith, or belief ... However you put it, faith or belief as understood by most religions has little to do with Buddhism. The question of belief arises when there is no seeing—seeing in every sense of the word. The moment you see, the question of belief disappears.”

On p. 9, he says,

> “It is always a question of knowing and seeing, and not that of believing. The teaching of the Buddha is ... inviting you to ‘come and see’, but not to come and believe.”

This invitation is the only true "religion" because it does not depend on beliefs, which always conflict with other beliefs.

The heart of the Buddha's teaching consists of the "Four Noble Truths". On p. 93 , Rahula presents the Buddha's teaching of the First Noble Truth:

> "The Noble Truth of suffering (Dukkha) is this: Birth is suffering; aging is suffering; sickness is suffering; death is suffering; sorrow and lamentation, pain, grief and despair are suffering; association with the unpleasant is suffering; dissociation from the pleasant is suffering; not to get what one wants is suffering."

On p. 17, Rahula says:

> "It is admitted that the term dukkha in the First Noble Truth contains, quite obviously, the ordinary meaning of 'suffering', but in addition it also includes deeper ideas such as 'imperfection', 'impermanence', 'emptiness', 'insubstiantiality'."

In *Mindfulness in Plain English* (2002), Henepola Gunaratana says,

> "Suffering is a big word in Buddhist thought. It is a key term and it should be thoroughly understood. The Pali word is dukkha, and it does not just mean the agony of the body. It means that deep, subtle sense of unsatisfactoriness which is a part of every mind moment and which results directly from the mental treadmill.

> The essence of life is suffering, said the Buddha. At first glance this seems exceedingly morbid and pessimistic. It even seems untrue. After all, there are plenty of times when we are happy. Aren't there? No, there are not. It just seems that way. Take any moment when you feel really fulfilled and examine it closely. Down under the joy, you will find that subtle, all-pervasive undercurrent of tension, that no matter how great this moment is, it is going to end. No matter how much you just gained, you are either going to lose some of it or spend the rest of your days guarding what you have got and scheming how to get more. And in the end, you are going to die. In the end, you lose everything. It is all transitory."

The First Noble Truth teaches us that all experience is underlain with anxiety and insecurity. (Anxiety and insecurity are unavoidable consequences of the sense of separate existence, see Sections 9.2, 9.3). We can see this directly by careful examination of our own lives. Clearly, whenever, we feel separate from something, we feel fear/desire regarding it (see Section 11.6). However, can we truthfully say that anxiety and insecurity do not tinge even those moments when we seem to feel content and complete? At the very least, such moments are always afflicted with the feeling that "this cannot last"--- and what will replace it?.

Exercise: (This is similar to the exercise in Section 7.2.) Sit or lie quietly with your eyes closed. Be aware of your thoughts, feelings, emotions, and sensations. Is there anything that does not change? Now see whether some things change faster than others. Which things change the fastest and which the slowest?

Question: What are some specific forms of suffering in your own life?

The Second Noble Truth as given by the Buddha is cited by Rahula on p. 93 of his book:

> "The Noble Truth of the origin of suffering is this: It is this thirst which produces re-existence and re-becoming, bound up with passionate greed. It finds fresh delight now here and now there, namely, thirst for sense-pleasures; thirst for existence and becoming; and thirst for non-existence."

Buddhism teaches that clinging creates a sense of individual existence and this is the basis for all suffering. Superficially, Buddhism (suffering caused by clinging) might seem to differ from Advaita (suffering caused by identification). However, we saw in Section 11.6 that clinging is inseparable from the sense of "me". Thus, identification can be thought of as clinging to whatever seems to be our identities. These might include notions of holiness, self-righteousness, pride, superiority, or smugness; or feelings of anger, anxiety, defectiveness, worthlessness, or wrongness. All clinging is suffering, especially clinging to the notion that we should have more control despite careful examination that shows us that we have no control at all (see Sections 5.9 through 5.13). In this sense, the Second Noble Truth is consistent with Advaita.

Question: Think of an event when you thought you should have had more control. Was it an experience of suffering? Did you really have any control, or did everything happen spontaneously?

Question: Think of an event when you wanted to be invisible. Which of the thirsts in the First

Noble Truth does this represent?

Question: Do you have a need to be "right"? If so, does this sometimes lead to anger and hatred towards yourself? Do you have a need for others to be "wrong"? If so, does this sometimes lead to anger and hatred towards them?

Question: Does suffering seem to be part of your identity? Does it help in structuring your life? What would happen if you let it go?

While the First and Second Noble Truths may seem pessimistic, the Third Noble Truth is optimistic because it shows us the way out of suffering (Rahula, p. 93):

> "The Noble Truth of the Cessation of suffering is this: It is the complete cessation of that very thirst, giving it up, renouncing it, emancipating oneself from it, detaching oneself from it."

The cessation of suffering is Nirvana, the Buddhist term for enlightenment.

The Fourth Noble Truth is the path leading to the end of suffering (Rahula, p. 93):

> "The Noble Truth of the Path leading to the Cessation of suffering is this: It is simply the Noble Eightfold Path, namely right view; right thought; right speech; right action; right livelihood; right effort; right mindfulness; right concentration."

Superficially, the Eightfold Path might seem to be a set of rules for proper living, but they are much more than that. The Buddha spoke to all levels of understanding. To the unaware, the Eightfold Path is indeed a set of rules, but to the more aware, they are pointers to our true nature.

What did the Buddha say about the existence of a self or soul? On p. 51, Rahula says,

> “Buddhism stands unique in the history of human thought in denying the existence of such a Soul, self, or Atman [what we have called the “me”]. According to the teaching of the Buddha, the idea of self is an imaginary, false belief, which has no corresponding reality, and it produces harmful thoughts of ‘me’ and ‘mine’, selfish desire, craving, attachment, hate, ill-will, conceit, pride, egoism, and other defilements, impurities and problems. It is the source of all the troubles in the world from personal conflicts to wars between nations. In short, to this false view can be traced all the evil in the world.”

[Note: Rahula is incorrect in stating that Buddhism is unique in denying the existence of a Soul, self, or Atman since the Buddhist concept of no-self is consistent with the Advaita teaching of no-self.]

On p. 55, Rahula goes on to say,

> “It is therefore curious that recently there should have been a vain attempt by a few scholars to smuggle the idea of self into the teaching of the Buddha, quite contrary to the spirit of Buddhism. These scholars respect, admire, and venerate

> the Buddha and his teaching. They look up to Buddhism. But they cannot imagine that the Buddha, whom they consider the most clear and profound thinker, could have denied the existence of an Atman or self which they need so much."

Thus, the purest of teachings can be corrupted by unenlightened teachers. Buddhism became a religion when its teachings were corrupted by the introduction of the "me". In contrast to Rahula's purist description, today's actual teaching of Buddhism includes a great deal of religious dogma. For example, in *The Story Of Buddhism: A Concise Guide To Its History And Teachings* (2001), Donald S. Lopez, Jr. says (from the excerpt at http://www.pbs.org/wnet/religionandethics/week445/lopez.html#right),

> "What is encompassed by this dharma [what is attributed to the Buddha] is indeed vast. It can include chanting the Buddha's name; circumambulating his relics; prostrating before his image; copying, reading, or reciting his words; painting his image; taking and maintaining vows; offering food and robes to monks and nuns; writing arcane commentaries; sitting in meditation; exorcising demons; visualizing oneself as the Buddha; placing flowers before a book; burning oneself alive."

Clearly, Buddhism in this form was not taught by the Buddha. Because of its emphasis on doctrine and rules instead of understanding, seeing, and knowing, Buddhism as religion tends to reinforce the imaginary "me" and its sense of doership, and therefore it is unlikely to eliminate suffering.

In the Second Noble Truth, the Buddha taught that craving produces reexistence and rebecoming. Some Buddhists think this means reincarnation. However, since the Buddha taught that there is no soul to be reincarnated, what did he mean by reexistence? Rahula says on p. 33:

> "What we call death is the total nonfunctioning of the physical body. Do all these forces and energies stop altogether with the nonfunctioning of the body? Buddhism says, 'No'. Will, volition, desire, thirst to exist, to continue, to become more and more, is a tremendous force that moves whole lives, whole existences, that even moves the whole world. This is the greatest force, the greatest energy in the whole world. According to Buddhism, this force does not stop with the nonfunctioning of the body, which is death; but it continues manifesting itself in another form, producing reexistence, which is called rebirth."

Question: When you read the previous paragraph, does it ring true? If so, what feelings are evoked--relief, liberation, detachment, anticipation, fear, anxiety, sadness, or something else? Are your feelings concerned with yourself, with others, or with both? If it doesn't ring true, what about it seems incredible? Why?

Any vision of departed souls is just an image in the mind. Any belief in reincarnation of the person is a belief in objective reality, not a direct experience (see also Section 10.4). Reexistence and rebecoming actually occur many times each second, some evidence for which we saw in Section 7.2. This can be seen directly by advanced Buddhist meditators (see

Mastering the Core Teachings of the Buddha (2004) at http://www.interactivebuddha.com/mctb.shtml, a free downloadable book by Daniel Ingram).

There are many schools of Buddhism. Theravada, which is thought to be closest to the original teachings of the Buddha, is aimed at one's own individual liberation. It spread to Ceylon (now Sri Lanka) in about 240 B.C.E. and from there to Southeast Asia. Mahayana, whose goal is the freedom of all sentient beings, not just the individual, was heavily influenced by other Indian teachings, and arose in the 2nd and 3rd centuries C.E. The third major vehicle of Buddhist theory and practice, Vajrayana, is thought to have arisen between the 6th and 12th centuries, and is a blend of Mahayana, Indian Tantrism, and the indigenous Bon tradition of Tibet. The distinctly Chinese form of Buddhism called Ch'an arose in the 6th century. It migrated to Japan where it evolved into Zen in the 12th century. The four schools of Vajrayana in Tibetan Buddhism arose between the 11th and 14th centuries. Finally, the school of Dzogchen, regarded by many Tibetans as the culmination of Vajrayana, arose in the 17th century.

Teachers of Advaita and Theravada differ in their concepts of Reality. Of fundamental importance in all Advaita teaching is the knowledge of our true nature as pure Awareness/Presence (God, see Section 14.3). For comparison, some teachers of Therevada say it has no concept of pure Awareness (see, e.g., http://www.accesstoinsight.org/lib/authors/bodhi/bps-essay_27.html), but others regard pure Awareness, or Buddha-nature to be the goal of the practice (see, e.g., see pp 156-157 of "Dancing With Life" (2008) and http://www.dancingwithlife.org/ by Phillip Moffitt).

Some Advaita groups have teachers who lead ordinary lives. These groups may mix other disciplines, such as yoga, Buddhist practices, and book study groups into their teaching. An example of one such group is the Advaita Meditation Center (http://www.advaitameditation.org/index.php).

Therevada practice in the West consists largely of Vipassana (see Section 14.6, and http://www.insightmeditationcenter.org/articles/InsightintheUS.html). There are many Vipassana teachers and groups, so it is not as difficult to find a Vipassana teacher as it is to find an Advaita teacher.

14.6. Vipassana meditation

Vipassana (Vi-**pah**-sa-na) as practiced in Theravada is the understanding of the Four Noble Truths as taught by the Buddha. It is the understanding of the transitory nature of phenomena and the selflessness of persons, that the “me” does not exist. The Buddhist meditation teacher Sharon Salzberg says about Vipassana meditation (http://www.sharonsalzberg.com/sharon/meditations/meditations.htm#med03):

> "Vipassana meditation quiets the mind and refines our awareness so we can directly experience the truth of our lives with a minimum of distraction and obscuration. This style traces directly to the way the Buddha himself practiced, and is common to all Buddhist traditions. Simplicity, stillness, and attention are its qualities.

> “The first pillar of meditation is concentration—stability of mind. We focus our normally scattered energy. The state we cultivate is tranquil, relaxed, open, yielding, gentle and soft. We let things be; we don’t try to hold on to experiences. Our mind is alert and deeply connected with what’s going on.
>
> “The second pillar is mindfulness. We are aware of what is happening as it actually arises—not being lost in our conclusions or judgments about it. We pay attention to our pleasant experiences, our painful experiences and our neutral experiences—the sum total of what life brings us."

This description is similar to our description of self-inquiry, i.e., inquiry into the contents of Awareness (see Section 23.2), but it stops short of Self-inquiry, i.e., inquiry into Awareness itself (see Section 23.3). Instructions for the practices of concentration and mindfulness are given in Section 24.2.

14.7. Zen

Centuries after Buddhism began in India, it spread through the trade routes into China where it was reshaped by contact with Confucianism, Taoism, and folk religion in Chinese culture. Many schools of Chinese Buddhism were then formed. In the 6th century, the "Intuitive School", called Ch'an (derived from the Buddhist meditation called dhyana), was introduced. From China, in the 8th century, Ch'an spread to Japan where, by the 12th century, it evolved into Zen, the Japanese pronunciation for Ch'an.

(The following three paragraphs are extracts from p. 36-38 of an article by Norman Fischer entitled *Nothing Holy*, in *Shambala Sun*, March 2004).

> Zen is a pithy, stripped-down, determined, uncompromising, cut-to-the-chase, meditation-based Buddhism that takes no interest in doctrinal refinements Not relying on scripture, doctrine, or ritual, Zen is verified by personal experience, and is passed on from master to disciple, hand-to-hand, ineffably, through hard, intimate training.
>
> Although Zen created controversy at first in all of the countries it spread to, eventually it became by far the most successful school of Buddhism in China, Korea, Japan, and Viet Nam. By the mid-1980s, the Zen traditions of all these countries had been transmitted to America.
>
> Although Zen eventually developed traditions of study and ritual, its emphasis on personal experience has always made it a practice-oriented tradition. The practice is meditation, or sitting Zen (zazen). Zazen is an intensely simple practice that is generally taught without steps, stages, or frills. The master teaches sitting in good, upright posture, paying full attention to breathing in your belly until you are fully alert and present. This sense of being present, with illumination and intensity, is the essence of zazen.

We see that the aims of Zen are similar to the aims of Vipassana, except that Zen

emphasizes illumination (satori) resulting from meditation, while Vipassana emphasizes insight. In this sense, Zen is very similar to Self-inquiry as described in Section 23.3, while Vipassana is similar to self-inquiry as described in Section 23.2.

14.8. Other nondual teachings

In nondual teachings, we can distinguish between two types of concepts, those that negate what is false, and those that assert what is true. The former always points away from what is false, while the latter attempts to point towards what is assumed to be true. Concepts that assert what is true can be misleading pointers. For example, to assert that Consciousness is infinite implies that 1) Consciousness can be described in conceptual terms, and that 2) Consciousness has no limits. Neither of these concepts applies to Consciousness, which is beyond all concepts. On the other hand, concepts that negate what is false can be useful pointers. For example, the statement that Consciousness is not a concept, entity, or object clearly means that Consciousness cannot be described in conceptual terms. A very useful negative pointer is the statement that there is no separation.

Because concepts are to be used only as pointers, it is clear that two different conceptual systems may both be effective pointers to Reality. This should not worry one who realizes the purpose of concepts. Which conceptual system one accepts will depend on how effectively it points to Reality in the intuitive eyes of the student. That is why different conceptual systems will usually appeal to different individuals. Clear examples of two perhaps equally effective conceptual systems are Ramesh's teaching, which emphasizes deep understanding of the absence of the doer, compared with Ramana Maharshi's teaching, which emphasizes inquiry into the "me" in order to discover its absence. Which one is chosen depends on the personality characteristics of the individual. (This course is a composite of both of these teachings.) Other systems of pointers to nondual experience are Vipassana and Zen.

Because the awakened teacher is not an individual but a body-mind organism through which Consciousness functions spontaneously and impersonally, from the point of view of the teacher (i.e., Consciousness), there is no personal sense of obligation or responsibility (although there will often be from the disciple's point of view), so there is no concern about whether a specific person will accept the teaching.

Because a conceptual system of pointers to Reality can be effective only if it is understood and accepted by the disciple, as experience is gained by the teaching body-mind organism, the teaching will usually naturally become simpler and more focused. Somewhat ironically, the simpler and more focused it becomes, the more some people will be driven away from it, and the more others will be drawn towards it.

In addition to the fact that spiritual beliefs cannot be true, no mere conceptual system can ever satisfy the yearning for Truth, which is the drive behind all spiritual seeking (e.g., "Know Thyself"--Inscription on the Oracle of Apollo at Delphi, Greece, 6th century B.C.). Only clear seeing can satisfy this, and in the end, only clear seeing can lead to the realization of our true nature. Because the intuition is constantly pulling us towards this realization, any practice based only on mentation rather than on clear seeing must strive to ignore this pulling. Furthermore, any belief system is constantly being challenged by competing belief systems. The result is that any belief system, in order to be sustained, requires constant effort at

defending it, reinforcing it, and shoring it up. This effort invariably strengthens the sense of separation that the belief system is supposed to dissolve.

Chapter 15. Free will and responsibility

The doctrine of individual free will and responsibility is widespread in both religion and psychology. The traditional doctrine of free will states that the individual is free to choose his thoughts and actions, and indeed must so choose. A poor or mistaken choice may lead to suffering, while a felicitous or correct choice may lead to happiness. Responsibility as it is conventionally defined means that one's suffering or happiness are a direct result of choices freely made. However, no traditional teaching dares to assert that a correct choice will always lead to happiness, for there is always the karmic load of past choices which must be endured, not to mention the role of chance in heredity and environment. Thus, causality and chance severely limit the fruits of one's choices. Furthermore, no choice even in itself can ever be entirely free because genetics and conditioning are always inseparable components. Thus, in traditional thinking, it is in fact impossible to determine that a choice was ever really freely made; hence, it is never really possible to assign blame, credit, or responsibility for any choice. This does not prevent people from attempting such assignments, however. Indeed, when society punishes a transgressor, there is usually as much self-righteous outrage as there is desire to deter or to condition future behavior. The tendency to assign or to assume total responsibility regardless of the actual degree of freedom in the choice places the chooser in a hopeless double bind. It seems that the only way to escape one's heredity and conditioning is to assert one's free will, yet free will is never possible because of one's heredity and conditioning!

Question: Do you feel responsible for your actions? What is the origin of that feeling?
Question: Does the thought of not feeling responsible scare you?

In some dualistic New Age teachings, in particular in *A Course in Miracles* (*ACIM, see* http://www.facim.org/) and in the "Seth" books of Jane Roberts (see http://en.wikipedia.org/wiki/Jane_Roberts), the double bind is escaped by simply asserting that all choices are totally free! Thus, the traditional concept of responsibility has been expanded to state that everything at all times that happens to an individual is a result of choices freely made, and that one must accept responsibility for one's entire life. This implies that one's heredity and environment are also a result of choice. The superficial advantage of adopting this point of view is that there is no room left for any ambiguity in accepting responsibility, and there is never any justification whatsoever in blaming anybody or anything else for one's own lot in life.

In this philosophy, since everything that happens to us is our own responsibility, the existence of separate, autonomous individuals who are making individual choices is not allowed. Therefore, we must comprise a single, collective, transcendent entity (in ACIM, this is the "Son of God" which makes the choice for separation as a result of a "tiny mad idea" (http://www.facim.org/excerpts/rfd9701.htm)). This is seemingly an empowering concept, because it requires that we accept the responsibility of being the sole cause of our destiny. However, a danger is that it can lead to tremendous guilt, regret, and self-condemnation when the inevitable misfortunes and disasters occur and we are forced to accept that our own

choices brought them about. The only way out of this guilt is to realize that we also have the choice of whether or not to feel guilty, and to regard the event as a blessing rather than a disaster. A major problem with this teaching is the complicated and unverifiable nature of the metaphysics. It must be accepted on faith as a theological truth.

In the teaching of *ACIM*, as in the dream metaphor that we used in Section 13.1, the world is a dream and all of the "individuals" are merely dreamed figures with no volition or free will. In both cases we are in reality transcendent to these figures. However, in contrast with nonduality in which we are pure Awareness, in *ACIM* we are the transcendent dreamer (the "Son of God") which is a being with form, intention, and volition. Thus, *ACIM* is dualistic because in it there is a separation between the dreamer and God. This separation is more than a merely dreamed separation, because in *ACIM*, God is our creator and knows nothing about the dream. However, if there were really no separation, God could not be our creator because then we would be God. In this course, we do not use the concept of God as creator because, not only is it not a useful pointer to Reality, but it is, in fact, downright misleading. Because fear inevitably arises whenever there is a belief in separation, if we think of God as our creator, we will fear God.

In contrast with nonduality, which says that the dream is a completely spontaneous happening within Consciousness, the dreamer of *ACIM* has total responsibility for everything that happens in the dream, as well as for the dream's (world's) existence in the first place. This responsibility exists even though the dreamer is asleep and dreaming, but, of course, the dreamer has chosen to fall asleep and to dream. In addition to giving us this unfathomable burden of responsibility, *ACIM* is much more complicated than nonduality. Important parts of it, such as the existence of the dreamer and of the choices it made prior to this lifetime, are intrinsically unverifiable, and are therefore merely theological assertions. Such assertions make the metaphysics unbelievable to the incredulous. Because they are made only to preserve the concept of free will which itself cannot be verified, there are no grounds for making them.

Both the traditional and the New Age ways of thinking are based on the assumption that there is an entity who makes choices and who must accept responsibility for the outcomes of those choices. Traditionally, this entity is the individual, whereas in *ACIM*, the entity is the dreamer. In contrast, we have already seen from empirical observation, not from *ex cathedra* pronouncements, that there is no free will (see Sections 5.9, 5.10, 5.11, 5.12, and 10.2) so there can be no responsibility. Furthermore, the sages of nonduality never speak of any kind of transcendent entity that chooses. The dream happens completely spontaneously.

An argument often arises in opposition to the concept of no responsibility. If there is no responsibility, what is to prevent an individual from being irresponsible, perhaps even indulging in the desire to steal or murder? If stealing or murder happens, then it happens, if not, it doesn't. This is true both before and after a person questions the concept of responsibility. Everything happens as it must, whether or not the concept of responsibility exists. It is very clear that the concept of responsibility has not prevented stealing and murder from happening in the past. Everything is part of the impersonal functioning of Consciousness, including stealing and murder. In addition to producing suffering, the concept of responsibility encourages a sense of moral outrage to arise when the event occurs, and a sense of moral retribution when the "perpetrator" has been caught and punished. Both reinforce the concept of separation. Of course, there is no perpetrator. We must clearly understand, however, that the widespread beliefs in the concepts of responsibility and retribution are also part of the

functioning of Consciousness. It is all happening as it must. (Even though the sage has no sense of personal responsibility, he/she is highly unlikely to steal or murder because the sage sees no separation between individuals, see Chapter 16.)

Is the absence of feelings of responsibility and guilt equivalent to the emotional blindness of a psychopathic personality? The answer is clearly no if we look at the characteristics of a psychopath (from http://en.wikipedia.org/wiki/Psychopath):

1. Superficial charm and average intelligence.
2. Absence of delusions and other signs of irrational thinking.
3. Absence of nervousness or neurotic manifestations.
4. Unreliability.
5. Untruthfulness and insincerity.
6. Lack of remorse or shame.
7. Antisocial behavior without apparent compunction.
8. Poor judgment and failure to learn from experience.
9. Pathological egocentricity and incapacity to love.
10. General poverty in major affective reactions.
11. Specific loss of insight.
12. Unresponsiveness in general interpersonal relations.
13. Fantastic and uninviting behavior with drink, and sometimes without.
14. Suicide threats rarely carried out.
15. Sex life impersonal, trivial, and poorly integrated.
16. Failure to follow any life plan.

The sense of being a separate individual is necessarily associated with the concomitant sense of having free will. Therefore, as long as we think of ourselves as individuals, we will feel that we are making choices. Some sages capitalize on this by teaching us that we are free to enquire into this sense of individuality and free will and thereby to look for the source of the I-notion. Ramana Maharshi, Russell Smith, and Nome, tell us that we are free at any time to wake up and be free, since freedom is our true nature. When asked whether there was free will or destiny, Ramana Maharshi said to some people that everything is predetermined, to others to find out who it is that has free will, and to still others that, as long as there is a sense of individuality, there is a sense of free will. Thus, these sages direct their answers to the level of acceptability by the questioner. But freedom of choice can only be a concept that may be useful for some people at some time to encourage them to question their freedom of choice and to see whether there can be true freedom in a mere concept.

Ramesh, Wei Wu Wei, and their enlightened disciples are some of the Western sages of nonduality whose teachings consistently emphasize the absence of the doer because the sense of doership is the source of all suffering. Other sages will at times ask that the disciple take responsibility for choosing, and at other times will say that everything happens according to destiny. One such sage was the Buddha who taught that there is no self that can choose (see Section 14.5) but at the same time asked the individual to take responsibility for his/her path out of suffering. The circumstances and the state of the disciple's ego determine which approach is taken. It is thus clear that for these latter sages, consistency is less important than using the most effective pointer to Reality for a particular disciple, time, and situation. They attempt to avoid the logical dilemma by saying that, as seen from the dream there appear to be

individuals and free will, but as seen from Reality there are no individuals and there is no free will. (None of these sages refer to a metaphysical transcendental self that chooses as does *ACIM*.) Furthermore, as long as we think we can choose, we will think that what happens to us is a result of our choices even though what actually happens depends on the state of the entire universe at the time (see Section 12.3). (The "law of unintended consequences" is a reflection of the impossibility of making a truly informed choice.)

From this discussion, we can see that to question the existence of free will is only one approach to the problem. Another approach is to question the existence of the “me” itself. When sages like Nome and Russell Smith say we are free to be free, the question must arise, who are the “we”? In Ramesh’s teaching, there is no “me” that can do anything, including questioning the existence of the “me” and free will. If questioning happens, it is because it must. If it doesn’t, it cannot. It is this understanding that leads to freedom.

Chapter 16. Love seeking Itself

16.1. Nondualistic vs. dualistic Love

In this chapter, we shall discover that our true nature includes not only pure Awareness but also Love, both of which are aspects of the same Reality.

Christianity teaches that God is Love:

> *"He who does not love does not know God; for God is love"* (1 John 4:8).

And,

> *No one has ever seen God; but if we love one another, God lives in us and his love is made complete in us* (1 John 4:12).

The love that was taught by Jesus, called agape (ah-**gah**-pay), is unconditional, altruistic love. Jesus taught his disciples to love others, with the ultimate goal being universal love. For example, in John 15:12, he says,

> *"This is my commandment, that you love one another as I have loved you."*

[Note that this is quite different from Mark 12:31:

> *Love your neighbor as yourself*,

because, what if you hate yourself?]

Agape is love that challenges the spiritual person to "love your enemies," or to "love without thought of return." It is a love that flows out to others in the form of compassion, kindness, tenderness, and charity. [Note: Charity does not always imply material giving. Giving of attention may be more meaningful than giving money or goods.]

Buddhism teaches that love consists of the "four Sublime States (see, e.g., Walpole Rahula, *What The Buddha Taught* (1959) p. 75):

1. Extending unlimited, universal love and good-will to all living beings without any kind of discrimination;
2. Compassion for all living beings who are suffering, in trouble and affliction;
3. Sympathetic joy in others' success, welfare and happiness; and
4. Equanimity in all vicissitudes of life.

[Note: Objectively speaking, compassion for others may be associated with the action of "mirror neurons" in the brain (*Empathy and the Somatotopic Auditory Mirror System in Humans*, by V. Gazzola, L. Aziz-Zadeh, C. Keysers, Current Biology 16 (2006) 1824-29). Mirror neurons, known to exist in humans and in macaque monkeys, activate when an action is either observed or heard. If you either observe somebody eating an apple or hear the sound of somebody eating an apple, some of the same neurons fire as when you eat the apple yourself. It is not difficult to imagine a similar thing happening when suffering in another is observed. Similarly, brain scans have shown that the same region of the brain is activated when voluntary donations are made to charitable organizations as when the participant receives the same amount of money as a reward (*Human fronto-mesolimbic networks guide decisions about charitable donation*, J. Moll, F. Krueger, R. Zahn, M. Pardini, R. de Oliveira-Souza, J. Grafman, Proceedings of the National Academy of Sciences 103 (2006) 15623-28)].

In *Everyday Mind* (1997), Buddhist meditation teacher Joseph Goldstein says,

> "The expression of emptiness is love, because emptiness means "emptiness of self." When there is no self, there is no other. That duality is created by the idea of self, of I, of ego. When there's no self, there is a unity, a communion. And without the thought of "I'm loving someone," love becomes the natural expression of that oneness."

Hinduism has a branch of yoga, the heart-centered path of Bhakta (Section 10.3), which leads to enlightenment through an overwhelming love for God that takes the form of loving all of humanity. The Chinese religions Taoism and Confucianism see transcendent love as an essential part of true wisdom.

Sufism is the inner, mystical, psycho-spiritual dimension of Islam. The essence of Sufi practice is to surrender to God, embracing at each moment one's thoughts, feelings, emotions, body sensations, and perceptions as manifestations of God. Among Sufi practices is a chant with the following words (from http://www.jamesburgess.com/images/dance pdfs/10 Love lover.pdf):

> Ishq Allah Mahbud Lillah (x4)
> God is love, lover, and beloved
> Love, lover, and beloved
> I am love, lover, and beloved
> Love, lover, and beloved

Since all religions and spiritualities teach the value, power, and necessity of love, we must ask, what is the role of love in Advaita? In order to answer this question, one must distinguish between what the world thinks is love, and what Love really is as seen by the sage. According to the sage, Love is a term that can be used to describe Consciousness expressing itself as the manifestation. In enlightenment, this is seen directly (see Chapter 25).

On p. 88 of *Be As You Are* (1985) by David Godman, Ramana Maharshi is quoted as saying,

> "Only if one knows the truth of love, which is the real nature of the Self, will the strong entangled knot of life be untied. Only if one attains the height of love will liberation be attained. Such is the heart of all religions. The experience of Self is only love, which is seeing only love, hearing only love, feeling only love, tasting only love and smelling only love, which is bliss."

Ramesh has said,

> "The presence of separation is the absence of love, and the presence of love is the absence of separation".

In the meditation for January 13 in *A Net of Jewels (*1996), he paraphrases his guru Nisargadatta (cf. the second quote by Nisargadatta below):

> "It is only when you arrive at the deepest conviction that the same life flows through everything, and that you ARE that life, that you can begin to love naturally and spontaneously".

In the meditation for January 18, he says,

> "Love as the word is generally understood, denotes separation, whereas in true non-objective relationship we do not love others, we ARE others."

In *As It Is (*2000), Tony Parsons says,

> "All and everything emanates from silence and unconditional love."

In *The Wisdom of Sri Nisargadatta Maharaj* (1992) by Robert Powell, Nisargadatta Maharaj is quoted as saying,

> "When all the false self-identifications are thrown away, what remains is all-embracing love."

In *The Ultimate Understanding* (2001), p. 180, Ramesh says that Love is more accurately called "harmony" or "beatitude". In *The Seeking* (2004), p. 77, he said that the feeling to do something for someone without expecting something in return could be called Love.

Nondualistic love is pointed to by Francis Lucille in the following article (http://www.stillnessspeaks.com/images/uploaded/file/Love%20in%20the%20Other%20Francis%20Lucille.pdf):

What is love? The word 'love' refers to a lived experience. It is a paradoxical experience because even though we have all experienced the reality of it, it appears to escape every attempt to grasp it, to describe it or to repeat it. The tender delight we had in our childhood when we looked at a beautiful colored illustration, the soft emotion when we think about a loved one, the impulse that moves us to encourage a stranger in deep sorrow and to help when in danger, the repulsion that grips us when cruelty is committed against oppressed innocence. All these circumstances among many others point to a common experience that cannot be described or defined. If we want to go deeper into the discovery of this central experience it seems that our investigation evaporates due to a lack

of objective support. If we do not have the words to express it and there are no images to describe it, it is because there are no perceptions or sensations to experience it objectively. Nevertheless we do have this experience. That is the paradox: it is unmistakably present. It has the same undeniable and ethereal character as conscious presence. We know this experience in the same way we know that we are conscious.

If we try to describe the trajectory up to the very last moment where it crosses over into the inexpressible, it seems as if the 'I' feeling dissolves, perhaps only temporarily, into a more spacious reality, infinite, a blessed peace that brings an end to all the emotional or intellectual agitation. We are not strangers to this new dimension. It is not the discovery of a spiritual America. It is immediately recognized as absolute intimacy and tenderness. It is the center of our self and the world, simultaneously. This presence is love.

Is there some particular condition before this quality of authentic love and compassion is revealed?
The condition is the temporary or permanent disappearance of the idea of a separate 'I'. This disappearance can never be the result of an action done by this 'I'. Love flies on its own wings and knows no laws. It is the emergence of grace that wrests us from the hypnosis of separation. Liberation arises out of freedom itself.
But you should not conclude from this that every act and practice intended to establish us as love is useless. Such a decision would confine us to intellectual dullness. The longing for love comes from love itself, not from the separate ego. On the contrary, we have to surrender to everything that takes us to love. In this surrender we discover true life, the inner peace that we have always sought.

Can love exist without an object?

Love exists only without an object. Love is the love of the objectless by the objectless. An object puts clothes on love, and dressed veils it. What we love in a person is neither the physical body nor the thoughts. It is the conscious presence that we have in common with him or her, the self, the objectless. The veil can exercise a temporary power of attraction, but only the true self that remains in the background can bring us what we seek. We don't love the other, we love the love in the other. This does not mean that we have to turn away from the other to turn towards God, the objectless, but rather that we see the other as an expression of love. Relations with our partner, son or daughter, a stranger, a foreigner then take on another dimension. Daily life becomes a field of experience that is forever new. If we approach the other as potential divine consciousness, we force God to remove the mask, which he does with a miracle; and the miracle is the smile of God.

The above phrases are all pointers, not descriptors, because nondualistic Love cannot be described. It is not something we do--It is an aspect of our true nature. Self-realization means to realize our true nature as Awareness/Love. We who still see ourselves as individuals are usually unaware that nondualistic love is What-We-Are. Religion sometimes points to it, but since Love is not a concept or rule of behavior, it cannot be packaged in a doctrine and taught.

[That the manifestation is an expression of Love is reflected in our felt need to communicate with each other. Communication is difficult without a commonly accepted and understood language. The universally used language of communication is the concept of objective reality. For this reason, we can think of objective reality as nothing more than a communication device. Objective reality need not exist as Reality. To believe that it is real is to believe that separation is real but, if separation is real, unconditional Love is impossible. This leads to the paradox of communication: The need to communicate is an expression of Love, but if the need to communicate fosters a belief in separation, it makes Love impossible.]

Nondual Love is the clear seeing that everything, without exception, is an expression of Itself. This includes all of the feelings and emotions that we suppress, including the suppressing itself, and all of the actions or speech that we wish we could take back, as well as the wishing itself. Nothing is excluded in the expression of nondual Love. Furthermore, what may seem to be just the opposite of Love is still just an expression of Love.
For the coming week, practice seeing that everything is an expression of Love. Remember that

any failure to see this is also just an expression of Love. See if this way of looking at your life changes anything, but remember that, whether there is change or no change, it is still an expression of Love. In the end, perhaps nothing will change except your way of looking at it, but you may then realize that that is the most profound kind of change that could ever occur.

How is nondualistic love different from dualistic love? Nondualistic love is not an emotion but transcends all emotions, is always unconditional since it recognizes no change, and is impersonal since it recognizes no person. Being nondualistic, it has no opposite and it transcends all objects so it cannot be directed towards any object.

On the other hand, since the perception of separation is the distinguishing feature of spiritual ignorance, dualistic love is based on the desire/fear polarity. It always involves attachment to the love object (e.g., the lover), which makes suffering inescapable when circumstances, such as the change or disappearance of the love object, require detaching from it. Being half of the love/hate duality, dualistic love easily switches to hate. It is highly personal and can take the form of pleasure, completeness, joy, desire, loneliness, jealousy, possession, guilt, responsibility, need, identification, subjugation, or submission. Because it is an emotion or sentiment that is felt while perceiving separation, it is in a different realm entirely from nondualistic love. However, since nondualistic love is the background of everything in manifestation, even dualistic love partakes of it while remaining largely unaware of it.

On p. 91 of *The Road Less Traveled* (1978), psychiatrist M. Scott Peck says,

> "To serve as effectively as it does to trap us into marriage, the experience of falling in love probably must have as one of its characteristics the illusion that the experience will last forever. This illusion is fostered in our culture by the commonly held myth of romantic love, which has its origins in our favorite childhood fairy tales, wherein the prince and princess, once united, live happily forever after. The myth of romantic love tells us, in effect, that for every young man in the world there is a young woman who was 'meant for him,' and vice versa. Moreover, the myth implies that there is only one man meant for a woman and only one woman for a man and this has been predetermined 'in the stars.' When we meet the person for whom we are intended, recognition comes through the fact that we fall in love. We have met the person for whom all the heavens intended us, and since the match is perfect, we will then be able to satisfy all of each other's needs forever and ever, and therefore live happily forever after in perfect union and harmony."

In a travesty of Love as Reality, love is often depicted in popular culture as more torment than peace. Witness, e.g., the mournful wail of lost, unrequited, or secret love in the “love” songs of popular and country music. [In fact, the suicide rate among devotees of country music is higher than that of the general public (*The Effect of Country-Music on Suicide*, S. Stach and J. Gundlach, Social Forces 71 (1992) 211-218).] Many singers have become professional sufferers in an effort to make their music sound authentic. And the story of love in the movies is often an agony of ecstasy, insecurity, and guilt, until the story ends at a marriage---if not the first marriage, the next ... or the next ... .

Personal love relationships have been called special relationships because they occur only between specific people in special circumstances. They are conditional and changing, but all

are a form of bondage because they are always infected by power struggles (see Sections 11.4, 11.5 11.6, 11.7), and are invariably guilt-ridden (see Section 11.8). Furthermore, because they are barter relationships, they depend on the mutual satisfaction of expectations and demands. When these are met, there is temporary gratification, gratitude, and enhanced self-esteem, but when they are ignored or refused, there is dismay, rejection, and guilt. Because barter relationships can survive only as long as each side has, and is willing to give, something the other wants, many personal love relationships end in disillusion. Others, after a long period of partly met and partly disappointed expectations, settle down to resigned acceptance (not true acceptance, see Section 19.2 and Chapter 22). Still others, after surviving their initial specialness, approach the unconditional nature of nondualistic love.

In romantic love, the much-sought "soul mate" is an illusion, being the projection of the wants and needs of one person on the other, who seems to be the missing half of a duality ("opposites attract"). Ironically, when the soul mate is finally found and possessed, the ego feels even more needy and incomplete. (Here, we shall speak as though the ego exists, while knowing that it does not.) It fears the loss of both the other and itself. Guilt and anxiety are seen as necessary parts of this "love", both for their intensity ("love hurts"), and as tools to manipulate the other ("if you really loved me you would ... "). So as not to lose the other, the ego may become neurotically dependent ("I can't live without you") or remorseful ("please forgive me"), or it make promises ("I'll never do it again"). And it may try to regain its lost self-esteem by inducing jealousy ("if you don't love me, I'll find somebody who will") or by belittling ("without me you would be nothing").

Question: Can any kind of dualistic love come without desire? Can any kind come without fear?
Question: Have you ever experienced suffering from a personal love relationship? Was the love worth the suffering?
Question: Have you ever experienced love switching to hate?
Exercise: First, please view the 16 min. video by anthropologist Helen Fisher at http://www.youtube.com/watch?v=OYfoGTIG7pY&feature=related. Second, as best you can, describe the experience of your first romantic love. Did it seem compelling and irresistible? Did it surprise you? Was it more or less what you expected? How would you describe the relative degrees of physical, mental, and emotional content in it? Has any other love matched it or exceeded it? Are you glad, or not, that you had the experience? Would you prefer that any love you experience from now on be less personal and more impersonal? If so, why? If not, why not?

Love as a practice is necessarily dualistic because of the assumed separation between lover and beloved. The purpose of such a practice is ultimately to see what nondualistic Love is ("fake it until you make it"). Love as a practice comes as half of the love/hate dualism, so the practitioner often feels failure, frustration, guilt, and fear until is it seen that nondualistic Love is not something you can do. Love just is (see Chapter 25).

On page 213 of *I Am That* (1984), Nisargadatta (Ramesh's guru) says:

> “Do not pretend that you love others as yourself. Unless you have realized them as one with yourself, you cannot love them. Don’t pretend to be what you are not,

> don't refuse to be what you are. Your love of others is the result of self-knowledge, not its cause. Without self-realization, no virtue is genuine. When you know beyond all doubting that the same life flows through all that is and you are that life, you will love all naturally and spontaneously. When you realize the depth and fullness of your love of yourself, you know that every living being and the entire universe are included in your affection. But when you look at anything as separate from you, you cannot love it for you are afraid of it. Alienation causes fear, and fear deepens alienation. It is a vicious circle. Only self-realization can break it."

An exalted form of dualistic love is identification with another person. This can occur in marital and familial relationships. It can also occur in Bhakti, the practice of devotion and surrender to God or guru (see Section 10.3). Because intuition is the link between separation and wholeness, it is intuition that gives us a sense of identification with the other even within the illusion of separation.

Identification with another is perhaps as close as we can come to nondualistic Love while still retaining a belief in separation. The less separation there is, the more unconditional love there is. As separation vanishes, we begin to see each other as ourselves. Indeed, unconditional love can be described as seeing others as ourselves.

Subjectively, identification with another may be a product of nonlocal of mind, as defined in Section 12.2. Objectively, the feeling of closeness and identity that many people experience with each other might be due to the overlap of their subtle bodies, as was also suggested in Section 12.2. Those who are able to sense auras can easily sense when one person's aura expands to include another person's.

A common experience among spiritual seekers is the feeling of peace and serenity that prevails in an ashram or other gathering of seekers. This is especially so during a silent retreat when the ego has no chance to assert itself through conversation. Maharishi Mahesh Yogi (b. ca. 1915, d. 2008), the founder of Transcendental Meditation, has elevated this effect into a guiding principle, which he calls the "Maharishi Effect" (see Section 5.2). This states that, when a group of people are meditating together, they create a harmonious, tranquil influence that is felt not only by the meditators, but also by anybody else in their vicinity. He has even formulated it into a quantitative principle--the number of people whose mental states are harmonized by a group of meditating people is equal to one hundred times the square of the number of people meditating.

The harmonious tranquility of nonlocal mind experienced in a spiritual community is extremely important for spiritual growth. Without this experience, it is easy to feel stagnation, frustration, and dryness. This is what Jesus meant when he said in *Matthew 18:20*:

> *"For where two or three have gathered together in My name, I am there in their midst."*

Some spiritual teachers (e.g., Gangaji) speak of a single, profound experience of awakening that occurred while they were in the presence of their master. They call this phenomenon "transmission", and it might result from the overlap of subtle bodies discussed above (see also Section 18.4). Other teachers say it happens more gradually over time. Some teachers (e.g.,

Francis Lucille) at times call it the “direct path” (but this is only one form of the direct path, see another in Section 23.4). Ramesh has called it “magic”, and says on p. 142 of his book, *Peace and Harmony in Daily Living* (2003):

> “. . . the average person experiences a certain kind of peace and relaxation in the sage’s company and he realizes that this has rarely anything to do with what is talked about during the meeting. The very presence of the man of wisdom seems to exude peace and harmony in spite of the fact that he seems to respond to outside events with an absolutely normal reaction!”

Many people have attested that the experience of being in the Presence of the sage is enlivening and rarely boring.

We now present a heuristic hypothesis about nonlocal mind: The more disidentified the mind, the more nonlocal it is and the larger is its subtle body (see Section 12.2). The more identified the mind, the less nonlocal it is and the smaller is its subtle body. This might mean that a disidentified mind could catalyze disidentification in an identified mind. Thus, disidentified mind might make possible both the "Maharishi Effect" among meditators, and transmission from sage to disciple.

In *The Self-Aware Universe* (1993), Amit Goswami has suggested that, if the brain has a quantum part, nonlocal mind might be an effect of a Bell-Aspect type of correlation (see Section 4.3 and Section 7.4). From this we might speculate that, if two people are initially in substantial mental agreement or alignment when they are in close proximity, their quantum brains might overlap, and a correlation might be established that could persist even if they became separated by large distances. Perhaps this correlation would be experienced as love.

Following is a beautiful example of nonlocal mind and unconditional love given by Sharon Salzberg (http://www.sharonsalzberg.com/sharon/influences/influences.htm):

> Nyoshul Khen Rinpoche lived in Paris when I first met him. The room was alive and vibrant with Khenpo laughing, teasing and playing with the children. The moment I saw him a constriction in my heart eased, one that I hadn’t even realized was there. He looked up at me, and as soon as our eyes met I felt I’d come home. The light I sensed coming out of him was brighter than even the most extravagant color of the walls surrounding us.
>
> Khenpo was the most spacious person I’d ever met. It seemed as though the wind passed right through his translucent being. Many times in his company I had the strange sense that we were standing in a wide open field, great empty expanses spreading out in all directions. Yet he was entirely unself-conscious like a magician unattached to his own magic.
>
> He taught me that in letting go of our burdensome desires for acquisition and performance, we can just let the mind rest in ease. As he would put it, “Rest in natural great peace, this exhausted mind.”

On p. 155 of *The Dalai Lama: A Policy of Kindness* (1990), the Dalai Lama says,

> "True happiness comes not from a limited concern for one's own well-being, or that of those one feels close to, but from developing love and compassion for all sentient beings. Here, love means wishing that all sentient beings should find happiness, and compassion means wishing that they should all be free of suffering. The development of this attitude gives rise to a sense of openness and trust that provides the basis for peace."

Love, whether dualistic or nondualistic, always includes acceptance. Acceptance of Totality as it is in every moment is one of the characteristics of whole mind, (see Chapter 19). Even in split mind, the more acceptance there is, the less separation and the more love (see Chapter 22).

Ardent nondualistic Love can be present even while the perception of separation still exists. An example is the all-encompassing yearning for Reality (or God) by the seeker (see Section 17.3). This is Love seeking Itself. (For a discussion of Love finding Itself, see Chapter 25).

16.2. Self-hatred and self-love

Writes Buddhist meditation teacher Sharon Salzberg on self-hatred (http://www.dharmaweb.org/index.php/Sit_by_Sharon_Salzberg):

"What do you think about self-hatred?" I asked when it was my turn to bring up an issue for discussion. I was eager to get directly to the suffering I had seen so often in my students, a suffering I was familiar with myself. The room went quiet as all of us awaited the answer of the Dalai Lama, revered leader of Tibetan Buddhism. Looking startled, he turned to his translator and asked pointedly in Tibetan again and again for an explanation. Finally, turning back to me, the Dalai Lama tilted his head, his eyes narrowed in confusion. "Self-hatred?" he repeated in English. "What is that?"

All of us gathered at that 1990 conference in Dharmsala, India-philosophers, psychologists, scientists, and meditators-were from Western countries, and self-hatred was something we immediately understood. That this man, whom we all recognized as having a profound psychological and spiritual grasp of the human mind, found the concept of self-hatred incomprehensible made us aware of how many of us found it all but unavoidable. During the remainder of the session, the Dalai Lama repeatedly attempted to explore the contours of self-hatred with us. At the end he said, "I thought I had a very good acquaintance with the mind, but now I feel quite ignorant. I find this very, very strange."

The fact that self-hatred was not part of his worldview pointed to the essence of my own aspirations. The need to resolve the ache of my self-hatred had sparked the fundamental spiritual questions in my life. In 1970, when I was 18, I went to India to learn meditation, wanting to weave the brokenness I felt inside into a cohesive whole, yearning to know what loving myself could possibly mean. My childhood, chaotic and painful, had not provided a matrix for learning how to do that nor really how to love others.

My father left when I was 4. My mother died when I was 9. My father returned briefly when I was 11, until a suicide attempt spun him away into the mental health system, from which he was never again free. Savage, uprooting turns and incomprehensible losses as I moved from household to household left me feeling abandoned over and over again--abandoned by life itself. Though caring people raised me, no one was able to speak openly about all that had happened. With very little stable love coming toward me, I developed the feeling that I didn't deserve much in life. I held my immense grief, anger, and confusion inside, fortifying my isolation and my innermost conviction that I was unworthy of love.

Just as I hid my suffering, I tried as hard as I could to hide my feelings of worthlessness. On many a day I'd watch the threads of my alliance with the world fray, and would silently note the disintegration of meaning in the world around me and in my actions. Yet under the bleakness, I wanted with all my heart to find a sense of belonging, to nestle deep into the comfort of a steady source of love and connection.

At 16, I entered the State University of New York at Buffalo. One of the courses I chose in my second year was Asian philosophy. I heard about Buddhism, a philosophy of life that said suffering was neither shameful nor the sign of something wrong with us. It pointed out that we are all linked to one another in our vulnerability to pain, all fragile in our exposure to the continual and unpredictable changes of life.

And I heard this quotation from the Buddha: "You could search the whole world over and never find anyone as deserving of your love as yourself." Not only did the Buddha say that love for oneself is possible; he described this

capacity as something we must nurture, since it's the foundation for being able to truly love and care for others. Despite my uncertainty, the possibility of a move from self-hatred to self-love drew me like a magnet.

The emphasis on caring for ourselves is certainly not limited to Buddhism; it is found in any true spiritual understanding. It is the foundation of our ability to connect with ourselves and with others from a basis of love and respect rather than from fear and aggression. Spiritual life gives us methods to make self-love real rather than abstract.

When I went to India, I wasn't interested in dogma or in rejecting one religious identity to assume another. I also felt that merely studying a religion as opposed to practicing it was like studying someone else's experience-and I was compelled to transform my own. So when I found an introductory meditation course in Bodh Gaya--that sounded right for me, I was happy to begin the process.

I was less happy to discover that meditation wasn't as exotic as I had expected. I had anticipated a wondrous, esoteric set of instructions, delivered in a darkened chamber with a supernatural atmosphere. Instead, my first meditation instructor, in the full light of day, launched my practice with the words, "Sit comfortably, and feel your breath." Feel my breath! I thought in protest, I could have stayed in Buffalo to feel my breath. But I soon found out just how life changing it is to learn to be simple, to fully connect to my experience in a loving way, to sit comfortably and feel my breath.

In a similar vein, I have found that the daily benefits of meditation are less dramatic than I had imagined. Yes, I have undergone profound and subtle changes in how I think and how I see myself in the world. I've learned that I don't have to be limited to who I thought I was as a child or what I thought I was capable of yesterday, or even an hour ago. My meditation practice has freed me from the old, conditioned definition of myself as someone unworthy of love. But in contrast to my initial fantasies, I haven't acquired a steady state of glorious bliss. Meditation hasn't made me happy, loving, and peaceful every single moment of the day. I still have good times and bad, joy and sorrow. But I can roll with the punches more, with less sense of disappointment and personal failure, because I have seen how everything changes all the time.

Meditation has taken me under the disguises we wear in the world to touch an essential truth--we are all alike in wanting to be happy, and alike in our vulnerability to change and suffering. Once I learned how to look deep within, I found the vein of goodness that exists in everyone, the goodness that may be hidden but is never entirely destroyed by the conditions of our lives. Glimpsing this goodness, I've come to feel, to the bottom of my heart, that I deserve to be happy, as does everyone else. Now when I meet a stranger, I feel less afraid, knowing how much we share. And when I meet myself in meditation, I find I am no longer a stranger.

Dissatisfaction with oneself is endemic in Western society because of the emphasis on the individual, free-will, and sin (see Section 11.8). Western culture promotes regret, guilt, and self-condemnation and calls it "taking responsibility". It gives rise to the feverish need to achieve, as well as to perfectionism, harshness, judgment, rejection, and exclusion. It is a result of the conceptual split between the "I" and the body-mind so that the "I" thinks it is separate from the body-mind (see Section 5.12) and feels encumbered by it. Consequently, the "I" hates the body-mind for not doing its bidding, and for having sensations and emotions that the "I" views as painful or sinful (see Sections 11.4, 11.5, 11.6, 11.7, 11.8). Because of this split, true self-love is rare for most Westerners.

However, love of another without fear, guilt, or possessiveness is impossible without loving oneself. In fact, because love is our true nature, love is something we discover, not something we do. But, how do we discover what self-love is? Tara Brach, a psychotherapist and teacher of mindfulness meditation, says in her 2003 book, *Radical Acceptance: Embracing Your Life with the Heart of a Buddha,* that self-love begins with the awareness of the body sensations in which the emotions are rooted. All conditioning, including self-hate, is stored in the body as well as in the mind (see Section 7.10 for a possible mechanism) and is not fully accessible to us without our becoming aware of our body sensations. Vipassana meditation (see Sections

14.6, 24.2) is a practice of becoming aware of these sensations and their associated emotions. Self-love is the acceptance of all of them with kindness (see Chapter 22). These include the “negative” emotions, such as anger, hatred, guilt, fear, and desire, as well as the “positive” emotions, such as generosity, kindness, forgiveness, happiness, and joy.

The ego's way is to make war, not love. If we wish to be at peace, we need to see that Love, not the ego, is what we are. Love is a sense of openness and connectedness that can be cultivated through many different kinds of practices (see the remaining sections of this chapter, plus Chapters 22, 23, and Section 24.2). Love is not created in these practices--rather, we become aware that it is already present.

16.3. Affirmation as self-love practice

Our conditioning of self-hatred can be deep and tenacious. Even if it temporarily disappears from consciousness in a moment, hour, or day of peace and contentedness, it can reappear unexpectedly at any time. Our self-image of victimhood is easily resurrected when we remember or return to any relationship in which anger, hatred, or confusion was present, such as with a former teacher, spouse, lover, boss, or political figure (see Sections 11.7, 11.8).

Exercise: Close your eyes and feel hatred for yourself. Where in your body do you feel it? What is the sensation? Now feel love for yourself. Where in your body do you feel it? What is the sensation?

Because self-hatred is conditioned, it can be corrected by deconstruction and reconditioning. Deconstruction is the process of seeing the fallacy of our beliefs about ourselves. This may require the long-term help of a therapist or teacher because self-hatred usually results from years of conditioning and reinforcement. Reconditioning may likewise require years of spiritual practice, spending time with a spiritual teacher, and patience. One form of reconditioning is affirmation practice. Since each person's conditioning is specific to his/her body-mind, each person must find the affirmation practice that is most effective for him/her self. I have found the following affirmation to be especially restorative for me:

> "I am infinite strength, infinite power, perfect health.
> I am light, love, peace, and joy."

The first line replaces the belief that we are constricted and bounded with the possibility that we are limitless. The second line replaces our attachment to sadness, aversion, unkindness, and despair with the possibility that our true nature is lightness, generosity, and kindness.

Exercise: After introspecting your identifications with limits, construct an affirmation that expands your identity to limitlessness. Use it mindfully! How does it make you feel?

Our conditioning is constantly being updated by every new experience but all new conditioning tends to be simply layered on top of existing conditioning. Hence, although our intention in affirmation practice is to replace old conditioning with new conditioning, there is the danger that the practice will merely add to our existing conditioning rather than replacing it. Hence, affirmation practice is best used primarily to get us functioning again when we are

overwhelmed with feelings of victimhood, depression, anger, hatred, bitterness, or resentment. The real spiritual work comes later when we are feeling more capable (see Sections 16.4, 16.5).

Any self-love practice may be accompanied by feelings of resistance (see Chapter 21) because we have been conditioned from early on that self-love, and even self-acceptance, is sinful (e.g., how can we possibly love ourselves when we are so dumb, so nerdy, so ditzy, so disorganized, so lazy, so meek, so impulsive, so careless, so aggressive, so angry, and so many other "sos"). But love, happiness, and forgiveness are our true nature so to think otherwise is Self-betrayal.

If they are to be effective, all self-love practices must be used mindfully, not mechanically. In addition to resistance, a self-love practice may result in profound feelings of relief, lightness, and acceptance. Unconditional self-love is possible because our true nature is unconditional love. With the emergence of self-love arises freedom and childlike playfulness. We all felt these as young children before they were conditioned out of us (see Section 11.8) but they can be recovered and recognized. Indeed, the way we begin to learn that we are unconditional love is by realizing unconditional self-love.

As we become aware of our true nature, we begin to trust in our innate goodness. This trust helps us to connect with others and to relate harmoniously to them, thereby reinforcing both our trust in ourselves and the harmony in our relationships.

16.4. Flooding ourselves and others with light

Flooding ourselves with light can lead to kindness for the self and others and thereby reduce our suffering. Identification with the separate self and its anger, resentment, fear, and anxiety is the source of all suffering (see Sections 11.4, 14.5). We can dissolve the sense of separation and darkness by flooding everything with light. It is intuitive so it is Reality based; it is imaginative but not imaginary; and it is extrasensory so it can be done no matter what the senses are sensing.

When we flood ourselves with light, we are not trying to get rid of any thoughts, feelings, emotions, sensations, or perceptions; we are lighting them up. For example, this Light does not suppress anger, it lights it up. In doing so, it uses the energy of anger to transmute it into Light. Light dissolves the separation between "me" and the emotions by lighting them up.

In nondual teaching, the "negative" emotions are just as much God as are the "positive" emotions. Light and darkness are both God. When Light lights up the darkness, it is God lighting up God. When we flood others with the Light from our own heart, we become aware of our own Light and the Light of others, and the artificial boundaries between "me" and "not-me" become less clear. Practicing this during meditation (see Section 24.2) makes it easier to practice it in daily activity.

Exercises: With your eyes closed, think "Love" and imagine yourself being flooded with light. How does it make you feel? Now do it with your eyes open. How does it make you feel? Now, with your eyes first closed, then open, think "Love" and flood yourself and a friend with light. (If the friend seems so distant from you that he/she cannot be flooded simultaneously

with you, bring the friend mentally closer.) Follow this with a neutral person (somebody you have neither positive nor negative feelings about), a disliked person, and a hated person (if there is one).

16.5. Tonglen practice

Connectedness is a condition of life. To deny it is to suffer. Whereas connectedness means that we feel both the pain and the joy of all living beings (the second and third sublime states in Buddhism, see Section 16.1), compassion is the willingness to feel the pain and to aspire for it to end. Compassion can be cultivated by using the Tonglen (taking and sending) practice of Tibetan Buddhism (see, e.g., p. 124-126 of *Genuine Happiness: Meditation as the Path to Fulfillment* (2005), by B. Alan Wallace). Tonglen is similar to the practice of flooding with light discussed in the previous section except that in Tonglen, we willingly take in our own suffering and the suffering of others, and we send out lightness and ease. The effectiveness of the practice stems from our willingness to take in the suffering of the world rather than pushing it away or denying it. As a formal practice, tonglen has four stages (as taught by Buddhist nun, Pema Chödrön in Chapter 12 of *The Wisdom of No Escape* (2001) and at http://www.shambhala.org/teachers/pema/tonglen2.php):

First, we rest our mind briefly, for a second or two, in a state of openness or stillness.

Second, we breathe in a feeling of hot, dark, heavy suffering— a sense of claustrophobia--and we breathe out a feeling of cool, bright lightness— a sense of freshness. We breathe in completely through all the pores of the body and we breathe out, radiate out, completely through all the pores of the body. We do this until it feels synchronized with the in-and-out breath.

Third, we work with our personal situation— any painful situation that is real to us. Traditionally, we begin by doing tonglen for someone we care about and wish to help. However, if we are stuck, we do the practice for the pain we ourselves are feeling and simultaneously for all those just like ourselves who are feeling the same kind of suffering. For instance if we are feeling inadequate— we breathe that in for ourselves and all the others in the same boat— and we send out confidence or relief in any form that we wish.

Finally, we make the taking in and sending out larger. If we are doing tonglen for someone we love, we extend it out to everyone who is in the same situation. If we are doing tonglen for someone we see on television or on the street, we do it for all the others who are in the same boat— we make it larger than just one person. Then we do it for all those who are feeling the anger or fear that we are caught up with and extend it to all beings.

Part 3. The end of suffering and the discovery of our true nature

Preface to part 3.

Let us quickly review the principles of nonduality that we have learned. Consciousness, as Awareness plus arisings in Awareness, is all there is. This cannot be stated too often. All objects including the entire world of people and things are arisings in Awareness. The only value of this concept lies in the reality of Awareness to which it points. Awareness is my true

nature. I, as Awareness, contain all objects of Awareness. "I" do not exist as a separate individual--"I" as an individual am simply an arising in I as Awareness. To see this directly is to be liberated from all suffering.

Now we come to the practical application of this course. Everything that has come before forms a groundwork of concepts that we shall now use as pointers in ending our suffering and uncovering our true nature. The purpose of spiritual teachings is to help to make us aware of the experiences that validate the concepts that we have learned. Most teachings incorporate some kind of spiritual practice. There are hundreds of different kinds of practice, and each spiritual teacher will teach his or her own version. We have focused, and shall continue to focus, primarily on two teachings that are currently taught by jnanis in the West. One of them does not involve a practice at all. This is the deep understanding of the absence of volition, doership, and the individual, as taught by Wei Wu Wei, Ramesh Balsekar, and their disciples. The other is the teaching of inquiry into our true nature, and variations of this teaching as taught by many teachers, such as Francis Lucille, Rupert Spira, and Greg Goode. Both are intended to cut through the paraphernalia and brambles that are characteristic of so many teachings and practices, to the essence and heart of all spirituality.

Chapter 17. How to live one's life

17.1. The problems with reading the scriptures

In the meditation for April 13 in *A Net of Jewels* (1996), Ramesh says,

> "We do not really live but are being lived. There is nothing anywhere but the one universal, impersonal 'I', and not a single object anywhere has any existence independent of it."

In the meditation for August 9, he says,

> "Anyone who has truly apprehended that it is impossible for him to live independently according to his own "will power" would naturally cease having any intentions. When he is convinced that living is a sort of dreaming in which he has no control over his actions, all tension ceases and a sense of total freedom takes over."

The title of this chapter misconstrues the living dream because we as individuals are not living; we are being lived. We are merely dreamed figures, and as such are being dreamed.

For the purpose of ease in communication, we shall often use the active voice as though there really are individuals doing something, rather than the passive voice, which is more appropriate for describing events happening spontaneously (causelessly). All spiritual sages and masters do this, but one must understand that it is only for convenience in communication and does not accurately portray what is happening. In fact, a common source of misunderstanding of the spiritual scriptures is this confusion. In many cases, the writings of the enlightened are descriptions of what is happening, not prescriptions for attaining enlightenment. Enlightenment cannot be attained by a doer, it can only happen spontaneously. A good example of this is the much-quoted Chapter II, Verse 47 of the classic Hindu text, the *Bhagavad Gita* in which Lord Krishna (a manifestation of God) describes to Arjuna the essence

of karma yoga, the yoga of action (as translated from Sanskrit by Ramesh, in *The Bhagavad Gita: A Selection* (no date)):

> "All you can do is to work for the sake of the work. You have no right to the fruits of the work (the consequences of your actions are not in your control). But do not let this fact make you lean towards inaction."

Ramesh explains that the nondualistic interpretation of this verse is that nobody has the freedom to choose whether or not to work. There is no free will, and work merely happens spontaneously. Any fear that acceptance of this verse will lead to fatalistic inaction is unfounded because whether action is to occur or not is not up to the individual. [Note: When you read the *Bhagavad Gita*, your insight into your true nature will be much more incisive if you identify with Lord Krishna (God) rather than Arjuna (the seeker)].

While we are considering this verse of the *Bhagavad Gita*, it is worth comparing Ramesh's translation with one by Maharishi Mahesh Yogi (MMY) in *Bhagavad Gita: A New Translation and Commentary with Sanskrit Text* (1969):

> "You have control over action alone, never over its fruits. Live not for the fruits of action, nor attach yourself to inaction."

This is a good example of how radically different the meanings of two different translations are. From MMY's translation it would be difficult to extract Ramesh's interpretation even though both translations presumably come through enlightened beings. The lesson here is not only to distinguish between description and prescription, but also to be very cautious in reading any writings that have been translated. Any translation will inevitably convey the message that the translator wishes to convey. Of course, the danger here is much greater if the translation was made by an unenlightened person. This is a difficulty with many translations of the ancient scriptures.

[Note: Many ancient scriptures were originally passed down in the oral tradition. Buddhist scriptures were not written down until about 25 B.C., 500 years after the Buddha's death (http://www.thebuddhistsociety.org/library/Scriptures.html#pali). The sacred Sanskrit literature of India is thought to have been first written down at about same time (http://en.wikipedia.org/wiki/Sanskrit_literature). Because Jewish scriptures had been in writing for centuries B.C., there was no oral tradition at the time of Jesus, but he himself left no writings. Thus, the first record of his teaching is thought to have been written about 70-80 A.D. by the apostle Mark (http://en.wikipedia.org/wiki/Gospel_of_Mark). In every step of these long processes, there was the danger of errors of memory, translation, and transmission.]

It is possible that the two different translations of the passages from the *Bhagavad Gita* above may be a result of the two different audiences that Ramesh and MMY intended to reach. Ramesh had no interest in diluting or compromising his message in order to reach a large audience, while MMY was interested in reaching the largest possible audience. Most people will not be interested in hearing that there is no free will, thus Ramesh's message inspires only a few, whereas MMY's message is welcomed by millions. (Again, of course, we must remember that both messages are part of the impersonal functioning of Consciousness, and neither Ramesh nor MMY is functioning as an individual.)

In the Advaita Fellowship Newsletter of November 2008, Wayne Liquorman says,

> "I was particularly amused when in one scene in the DVD Maharaj talked about the LIFE FORCE being responsible for everything. What was written in the subtitle was that the LIGHT SOURCE was responsible for everything! It was certainly a simple and understandable mistake but it illustrates the inherent danger of considering the recorded statements of the guru as being Truth. I would not be surprised to learn that somewhere in the world there was a seeker earnestly prostrating himself in front of a light bulb!"

As this quote illustrates, another difficulty with reading spiritual writings is that most of them were written to be understood and accepted within the culture of the original audience. Because such cultures were usually vastly different from contemporary Western culture, reading translated spiritual writings has the additional difficulty that the spiritually meaningful must be separated from the culturally irrelevant. This is true not only for ancient scriptures, but also for the translations of relatively recent dialogues between sages and their disciples. One particularly misleading and aggravating example is that of Ramana Maharshi's concept of the Heart. Maharshi spoke frequently of the Heart, a term which he used to signify the Self. However, this causes no end of confusion, not only for today's readers of his dialogues, but also for his original audiences. Because many sages refer to the feeling and emotional center in the body as the heart, people commonly tried to locate the Self in the body rather than thinking of it as pure Awareness.

Translating a spiritual system from one culture to another can be treacherous. For example, traditionally, the teachings and practices of Buddhism contained more than 200 rules of behavior for monks and more than 300 for nuns (http://en.wikipedia.org/wiki/Vinaya). However, as Buddhism has spread to the West, these rules have presented huge obstacles to Western laypeople in their efforts to practice Buddhism. Consider some examples of the Buddhist precept against killing (from http://www.accesstoinsight.org/lib/authors/ariyesako/layguide.html#harmlessness):

> "Deliberately killing an animal — or having it killed — is an offence. [This includes creatures down to the size of a bedbug or ant.]
>
> "Using water, knowing that it contains living beings that will die from one's use, is an offence.
>
> "One of the monk's requisites is a water filter. This is employed to prevent the killing of (visible) waterborne creatures when making use of water from a well or stream. Practically, this also leads monks to take extra care that they cover water jars or regularly change water so that mosquito larvae do not have opportunity to breed.
>
> "Intentionally damaging or destroying a living plant is an offence ... Therefore destroying a living plant — for instance, felling a tree, uprooting a flower, burning grass — is an offence; as is picking fruit from a tree, a flower from a bush, etc. It is an offence of wrong-doing to damage or destroy fertile seeds or pips, or viable seedlings."

Now let us compare this precept with the proscription against murder in the Bible (all biblical passages are from the New Revised Standard Version at http://bible.oremus.org/):

In *Exodus 20:13,* the original Sixth Commandment is stated:

> *Exodus 20:13 You shall not murder.*

But this is followed by the following passages from Deuteronomy 21:

> *18 If someone has a stubborn and rebellious son who will not obey his father and mother, who does not heed them when they discipline him, [19]then his father and his mother shall take hold of him and bring him out to the elders of his town at the gate of that place. [20]They shall say to the elders of his town, 'This son of ours is stubborn and rebellious. He will not obey us. He is a glutton and a drunkard.' [21]Then all the men of the town shall stone him to death. So you shall purge the evil from your midst; and all Israel will hear, and be afraid.*

and the following ones from Deuteronomy 22:

> *20 If, however, this charge is true, that evidence of the young woman's virginity was not found, 21 then they shall bring the young woman out to the entrance of her father's house and the men of her town shall stone her to death, because she committed a disgraceful act in Israel by prostituting herself in her father's house. So you shall purge the evil from your midst.*

Interpreting the Christian Bible has not only the difficulties of being written for a different culture, and being written or translated by writers whose enlightenment is dubious, but it also has the additional obstacle of being intrinsically dualistic. Nevertheless, as we see in Sections 14.3 and 21.3, several passages have nondualistic interpretations, although these interpretations are virtually unknown in Christian circles. Furthermore, any scripture that is based on the God-concept is most easily given a nondualistic interpretation if God is assumed to be Awareness/Presence (see Section 14.3) rather than being separate from us.

Question: Have you ever been unable to understand the Bible? Have you ever been able to understand it?

Compare the above passages with the following ones from Chapter 18 of the *Bhagavad Gita* (see http://www.celextel.org/bhagavadgita/):

> *16...the one with bad understanding,*
> *Who looks upon the soul as the agent of all action,*
> *Is of perverted mind and does not realize the truth.*
>
> *17 But the one who does not feel that he does it,*
> *And whose self is not attached to what he does,*
> *Does not kill any beings even if he kills them.*

The Bhagavad Gita is not a manual for behavior, but rather is a description of nondualistic action (which we can call nonaction).

17.2. Whatever happens must happen

In physics, the invariance of physical laws describes what does and does not happen. For example, because physical laws are observed to be the same everywhere in space (invariance in space), momentum is observed to be conserved. Because physical laws are observed to be the same at all times (invariance in time), energy is observed to be conserved. In general, anything that is permitted by invariance principles and conservation laws can and does happen, and anything that is precluded by them does not happen. However, although we call these principles laws, there is no obligation for nature to obey them. They are merely man-made descriptions of what is regularly observed to happen or not to happen (see Section 12.4).

Theoretical cosmologists apply the known physical laws to the study of the universe as a whole. The cosmological anthropic principle was first stated by Australian theoretical physicist Brandon Carter in 1974 (Carter, B., *Large Number Coincidences and the Anthropic Principle in Cosmology*, in *Confrontation of Cosmological Theories with Data*, M.S. Longair, Editor. 1974, pp. 291-298). Simply stated, it says,

> "What we can expect to observe must be restricted by the conditions necessary for our presence as observers."

In other words, what we observe depends on our existence as observers (see also Sections 6.4, 6.5, 6.10). The physical laws that we observe must be compatible with life as we know it. If they were not, we would not be around to observe them. This is tautological but it is also profound.

Cosmologists use the many-worlds interpretation of quantum physics (see Section 6.7) because it does not require a separate observer and because it describes and includes life itself. In this interpretation, anything that is allowed by physical law can and does occur in some universe. Cosmologists study a variety of theoretical universes, in only some of which are conditions such that life is possible. If we consider all of these conceptual universes, plus the general principle that whatever can happen does, we can restate the anthropic principle in a slightly different way:

> In every universe in which life can happen, it does.

However, since Advaita is not theoretical, there is no objective reality and there are no other possible universes. Because life happens in this moment, there is no possibility that it does not happen in this moment (another tautology). Thus, we can say:

> Life happens because it must.

Because we know from our own experience that life does not happen without suffering (see Sections 14.5, 21.1), we can also say:

> Suffering happens because it must.

Suffering is universal, therefore it is impersonal. It is a problem only if we think it is directed at us personally rather than being an impersonal fact of life. When suffering happens, it is foolish

to resist it (see Section 21.1). If we could feel our anger and sadness without thinking they should not be this way, we might experience a profound shift in our perception of life (see Chapter 25).

Question: Suppose you accepted that suffering is not your suffering, but instead is impersonal. Would it still be suffering?

In the meditation for July 2 in *A Net of Jewels* (1996), Ramesh says,

> "Once there is a clear apprehension that an individual human being is an inseparable part of the totality of phenomenal manifestation and that he cannot pull himself out of the totality as an independent and autonomous entity, man naturally ceases to have personal intentions. When he is convinced that living is a sort of dreaming in which he cannot have any effective control either over his circumstances or his actions therein, all his tensions cease, and a sense of total freedom takes over. He then willingly and freely accepts whatever comes his way within the totality of functioning that this dream-life is."

In the September 2009 issue of the Advaita Fellowship newsletter, Wayne Liquorman says,

> "One of the most common responses I get during my talks about the Living Teaching is, "If everything is 'just' a happening and is predetermined, why should I make any effort to do anything?" The key word in the statement is "should." In fact, there is truly no question of should. Whether you realize it or not, you do what you do because the Universe dictates your actions. It does so via a combination of genetic predisposition combined with subsequent environmental conditioning (experience and learning). If you look deeply into your own actions you may see that you do things regardless of your feelings that you should or shouldn't do them. The "should" is simply a story that is told about what will happen or has happened. Sometimes what happens is aligned with your feeling of "should" and you are content. Other times there is a disconnect between what has happened and what you feel "should" have happened and there is guilt (if it is YOU that should have done it differently) or a feeling that the world is messed up (if it is the UNIVERSE that should have done it differently).

When our decisions are in agreement with what happens, our mistaken sense that we decided what we were going to do is reinforced, and then we feel pride at our successes. At other times, no matter how determined we are to do something or not to do something, our actions are just the opposite. This causes guilt and frustration at our incompetence, lack of discipline, or lack of character. The truth in both cases is that neither our decisions nor our actions are ever in our hands, but are entirely spontaneous.

A good metaphor for this situation is given by Wei Wu Wei in his 1964 book, *All Else is Bondage*. A child rides in one of the toy cars going around a track at a carnival. The cars are confined to the track by the mechanism, so that the steering wheel has no effect at all. At first, when the car goes in the direction in which he is steering, the child thinks he steered the car in that direction. Then, when he steers in the wrong direction and the car does not go that way, he either becomes frustrated or learns that his steering has nothing to do with the direction the car is going in. If he learns this, he is a lot smarter than we who still think we have the power to do something.

In the meditation for July 14 of *A Net of Jewels* (1996), Ramesh says,

> "Understand that there really is no doer and continue to act in life as if you are the doer; then the appropriate attitude of compassion gets developed."

With all this in mind, what can we say about how to lead one's life? In general, we can say two things. First, since the ego is powerless to choose or to act and everything happens by itself, it is clear that everything that happened in the past had to happen just as it did. Nothing about it could have happened in any other way. Really understanding this means that there can be no possibility of guilt, regret, shame, or blame for anything in the past, either directed towards oneself or anybody else. However, until total understanding occurs, guilt, shame, and blame are likely to continue.

Second, since we cannot decide or choose our actions, everything that happens now and in the future must happen in the way that it happens. There is nothing that we should or should not do, and nothing that we should have done or should not have done. This understanding helps remove any vacillation or indecision that is based on fear of making a mistake, since we know that mistakes are not possible. (It need not remove all indecision since there can be natural indecision not based on fear of making a mistake.) We then know that what we want as well as our choices and the outcomes of our choices all happen spontaneously and impersonally. When we become accustomed to the idea that we not only do not make decisions but cannot make them ,and that decisions just happen, we just witness what happens. We can then witness the chain of thoughts leading to a decision, and see the inevitability of each decision. A simple, practical way to summarize this approach is to just be aware that we are not doing anything. Most likely, no radical change in behavior will occur because in fact we have never done anything.

Question: What is the "I"? Where does the thought that it can do something come from?

17.3. Meaning and purpose in life

In the meditation for March 8 of *A Net of Jewels* (1996), Ramesh says,

> "To this that you see as the universe, there is no purpose. It is all a lila, a play in which we join and contribute some entertainment to pass the time."

In the meditation for July 16, he says,

> "The meaning of life is that life has no meaning other than the living of it as a dream over which one has really no control."

In the meditation for April 29, he says,

> "To consider that the world has no meaning or purpose is merely to say that the world is not centered on humanity. Without his ideals and motivations, an individual is frightened of being a nothing in the nothingness of a purposeless world. In actuality, man's ideals of "purpose" as the basis of life and nature are nothing but his own conditioned

concepts. Nature cannot be seen in terms of human thought, logic or language. What appears cruel and unjust in nature seems so only when the matter is considered from the view point of a separated and estranged individual human. But the rest of nature is totally unconcerned because the rest of nature is not human-hearted."

In the meditation for May 6, he says,

"That this entire phenomenal show of the universe has no purpose indicates the obvious futility of seeking a goal in life. No sooner is a goal conceived than spontaneity is at once destroyed and the self conscious ego takes over in destructive competition against everything that comes, thus missing all that is worthwhile in life. It is, indeed, the "purposeful" life which entirely misses out on the purpose of life! The true purposeless vision misses nothing and enjoys everything without inhibition."

Question: Is it fearful to you to think that life has no meaning of its own?

Whenever good or bad fortune strikes, the thought may arise in the conditioned mind that there must be some meaning to it, particularly if a belief in God is also present. Thus, the event may be thought to reflect either God's favor or disfavor, and this can result in either pride or guilt. However, if God's will is all there is, (see Section 12.5), there can be no individual to feel pride or guilt. If pride or guilt arises, it is God's will, not the individual's.

In the teaching of nonduality, the world has no meaning in itself. Birth, life, good and bad fortune, sickness, suffering, and death are all impersonal. Therefore, to think that "my" suffering is due to "my" failure is a misunderstanding. Any thought of meaning is just a thought that has no more meaning than any other thought. However, do not make the mistake of believing that absence of purpose is the same thing as presence of randomness. We know from our own past and from history that events occur in a pattern, not at random (see Section 12.3).
In nondual teaching, it makes no sense to ask, what is the meaning of Love, Being, Presence, or Awareness. The notion of meaning itself is superfluous because the essence of nonduality is Love, Being, Presence, and Awareness (see Chapter 16). But remember, these words are intended as pointers, not descriptors, because nonduality cannot be described (see Section 10.1).

In the meditation for May 20 in *A Net of Jewels* (1996), Ramesh says,

"Essentially, what the average person wants out of life is just one thing: happiness. It is in this quest that he goes through life day after day in the firm belief that he will somehow, someday find final satisfaction through the things and circumstances of his world. There comes a time, however, when man gets utterly tired, physically and mentally, of this constant search because he finds that it never ends. He comes to the startling discovery that every kind of satisfaction has within itself the roots of pain and torment. At this stage his search cannot but take the turn inwards toward that happiness which is independent of external things."

Question: Does this quotation describe your experience?

Ramesh's statement is consistent with the Buddha's "Four Noble Truths" (see Section 14.5): the Presence of Dukkha, the Cause of *Dukkha*, the End of *Dukkha*, and the Path Leading to the End of *Dukkha*.

On p. 95 of *I Am That* (1984), Nisargadatta says,

> "You have a purpose only as long as you are not complete; till then completeness, perfection, is the purpose."

What else can we say about purpose in one's life? The first thing we can say is that we never choose a purpose—purpose happens spontaneously as does everything else. If purpose must happen, it will happen, if not, it won't. With that said, we can also say that, while most people are unhappy if their lives seem purposeless, purpose is not static, and usually changes as one evolves. Initially, it is likely that one's purpose will be simply to find a better, simpler, more meaningful, more peaceful, more satisfying way to live, without all of the conflict, stress, and dissatisfaction that accompanies life driven by ego fears and desires. As one evolves, purpose may become more specific, and may narrow down to an all-consuming search for God, for the Self, or for Reality. The search then guides and determines where and what one does, from work, to rest, to vacations and holidays, to reading, to friends, to diet, to exercise, to spiritual practice. Every minute of one's life becomes dedicated to the search. Gradually, the realization grows that what one is looking for cannot be found outwardly, and attachment weakens, suffering decreases, and the intensity of the search diminishes. Soon it matters little whether awakening happens or not. Then, spiritual seeking and the sense of personal doership both disappear, and the realization occurs that there never was an individual entity doing anything.

Question: Do you feel that your life has a purpose? Has it ever changed?

17.4. The will to live/the wish to die

In the meditation for November 3 in A Net of Jewels (1996), Ramesh says,

> "The essence of manifest existence is continuous change, from integration or birth to disintegration or death. With sentience comes the will to live, to not yield to disintegration, and this is the ego, which generates the thinking mind and all man's misery in the ensuing futile attempt to avoid the inevitable."

Purpose can manifest in a multitude of forms, the most apparent among them being the will to live. However, the Second Noble Truth of Buddhism states that suffering comes from the craving for nonexistence as well as from its dual opposite, the craving for existence (see Section 14.5). An extreme form of craving for nonexistence is the death wish. When the death wish appears in an unaware person, it is usually interpreted as a wish for the destruction of the body, and he/she will try to suppress it out of guilt and because of the religious and cultural stigma against suicide. However, to suppress it is to throw away an opportunity to understand it. A more aware interpretation is that the death wish is nothing more than a wish for the end of suffering. This need not require physical death because the body is not the source of the suffering (although it is the seat of physical pain). As we have seen in Section 11.4, the real source of suffering is identification with the "I"-concept, which results in the imaginary "me". Thus, the death wish is really a wish for disidentification and for the ensuing peace.

Question: Are you afraid to die? Are you afraid not to die?

The stigma against suicide condemns as sin any attempt to escape from life because religion regards life as a duty, burden, or sentence imposed on us by God. This is an example of the absurdity to which belief in a god created in the image of the ego will lead (see Section 14.2).

Disidentification from the "I"-concept can occur without death (see Chapters 20, 22, 23, 24), whereas disidentification from the body is death (see Section 10.4). Since the body itself is nothing but an inert mechanism, death has no intrinsic meaning (see previous section). Whatever state of spiritual awareness is present, life in extreme pain or depression can become intolerable. Even for the aware, physical pain can become so intense that the impulse to end it all will not be easily dismissed.

In 1980, Derek Humphry organized the Hemlock Society in order to inform those who are suffering from incurable disease of their options for release. His book, "*Final Exit*" (1991), is a how-to manual that discusses "the practicalities of self-deliverance and assisted suicide". In the plaudits to the book, Isaac Asimov wrote,

> "No decent human being would allow an animal to suffer without putting it out of its misery. It is only to human beings that human beings are so cruel as to allow them to live on in pain, in hopelessness, in living death, without moving a muscle to help them. It is against such attitudes that this book fights."

Whatever the motivation, if suicide occurs, it need not be interpreted as failure. How can there be failure if there is no doer and there is no choice?

Question: Have you known somebody who committed suicide? Do you think that person failed at life?

17.5. If suffering is to end, spiritual practice usually happens first

Whether or not we suffer is not up to us. Whether or not we engage in any kind of practice, and if we do, whether or not it works, is also not up to us. As we have said previously, awakening (and all other events) can only happen spontaneously. It can never be the direct result of imagined doership in any behavior or practice.

What then can we say about spiritual practice? Although there are isolated cases of enlightenment occurring without prior spiritual practice (Ramana Maharshi is an example), in the overwhelming majority of cases, much intense practice comes before enlightenment. However, it would be a mistake to expect that spiritual practice in itself will lead to awakening because there is an imaginary doer in all volitional practice and the doer itself is the problem. **If spiritual practice happens, its real value is that it can relieve our suffering** (see examples in Section 16.2)**.**

Let us recall what Galen Sharp says about why we are dissatisfied (see the full document in Section 17.8):

> “Because not everything goes our way. Because we dread doing the things we don’t want to do, but have to do. And we can’t do many things we want to do. All this boils down to the fact that we feel we are a person with desires that conflict with our circumstances and responsibilities.”

Similarly, in the July 3 meditation in *A Net of Jewels* (1996), Ramesh says,

> “Life presents problems because we fight life; we don't accept what-is in the present moment. We want to become something other than what we are. We want something other than what we now have.”

Suffering is a consequence of identification with the "I" (see Section 11.4). If we feel that we are limited, we will feel that we need to have control over what happens to us. But in fact we are limitless. We have no control but we need none, including in any of the practices mentioned in this course. So, why are the practices mentioned? If a body-mind is so conditioned that it allows a practice to happen, and if the intention to practice occurs, it might happen. If not, it probably won't (see Sections 5.15, 18.4). But, if a practice does not address the nature of suffering and its causes, it will not relieve suffering.

Effective practices relieve suffering by quieting the thinking mind (see Section 11.9). This is necessary for the efficient functioning of the working mind. A quiet mind is also an end in itself since it is always accompanied by the peace of pure Awareness. In fact, this can be a guide to distinguish between effective and ineffective practices. If suffering is relieved by a practice, it is worth continuing. If it does not, and especially if suffering increases, it is better to discontinue it.

Effective practices help to disidentify from all forms of conditioning. Somewhat ironically, a quieter thinking mind initially allows unconscious conditioning (see Section 5.15), also called vasanas or latent tendencies, to rise to the awareness of the conscious mind. The thinking mind ordinarily represses unwanted thoughts, urges, and desires, which are the dark side of the ego (the shadow). When repression ceases, the shadow comes into awareness. Papaji (H.W.L. Poonja) described this by saying that, when you begin to awaken, all the gods and demons of your past come to reclaim you. Vasanas are no different from any other aspect of the functioning of Consciousness. It is just as possible to disidentify from them as from any other kind of conditioning (see Chapters 22, 23, 24). The potential of vasanas to destroy one’s peace is minimized by the deepening realization that their release represents the dissolution of the thinking mind.

On pp. 477-478 of *I Am That* (1984), Nisargadatta says,

> "The true teacher will not imprison his disciple in a prescribed set of ideas, feelings and actions. On the contrary, he will show him patiently the need to be free from all ideas and set patterns of behavior, to be vigilant and earnest and go with life wherever it takes him; not to enjoy or suffer, but to understand and learn.
>
> Under the right teacher, the disciple learns to learn, not to remember and obey. Satsang, the company of the noble, does not mold, it liberates. Beware of all that makes you dependent! Most of the so-called “Surrenders to the Guru” end in disappointment, if

not in tragedy. Fortunately, an earnest seeker will disentangle himself in time, the wiser for the experience."

We must keep in mind that our true nature is characterized by the absence of the sense of personal doership. This cannot be realized if we engage in any practices that require our doing something without looking for the doer that is doing it. Therefore, any other dos and don'ts, or shoulds and shouldn'ts, given to us by a spiritual teacher must be a warning that that particular teacher may not be Self-realized, and cannot help to end our suffering. There are far more teachers in this category than there are who genuinely realize their true nature, and who would never try to impose a regimen that would increase our sense of bondage. The world of spiritual materialism is a vast marketplace of tricksters, magicians, clowns, performers, entertainers, hucksters, and money seekers, most of whom are deluded into thinking they are free, and who disguise themselves in their own fantasy versions of divine garb and persona.

Particularly destructive among the self-deluded spiritual teachers are those who teach that only they and their personal power can bring freedom, or that they are the ones best suited for the task. They would merely increase our sense of boundedness, thus strengthening the chains of our bondage. No genuine teacher will imply that we need anything or anyone, since we are already free and complete. A teacher's function is to convey this to the student, and to help him or her to see that. A teacher is at best an invaluable resource to the student, and at worst, a "false prophet", the deluded purporting to teach the deluded, the blind trying to lead the blind (for subjective ratings of a large number of spiritual teachers, consult http://www.globalserve.net/~Sarlo/Ratings.htm).

Question: Have you ever been misled by a spiritual teacher?

17.6. The rarity of enlightenment

We now say a few words about the probability that awakening will occur in any particular body-mind organism (it would be incorrect to say that awakening occurs to an individual, since awakening is the understanding that there is no individual). For this purpose, Ramesh is fond of quoting Chapter 7, Verse 3 from the *Bhagavad Gita*. In this verse, Lord Krishna says to Arjuna,

> "It is perhaps only one in thousands of beings who strives for freedom. And among those who strive—and think they have succeeded—hardly one knows the total Truth of My Being."

Because enlightenment cannot be measured objectively, it would be impossible to determine how many enlightened beings there are in the world, but this passage may be a guide. The verse says that only one in thousands is even a seeker. For example, of the current population in the U.S. of 300,000,000, there may be a few hundred thousand seekers. Of these seekers--who in addition think they are enlightened--hardly one knows Reality. This is a very vague statement, but perhaps it means another factor of 1000 down. If so, it would mean there are fewer than a thousand truly enlightened beings in the U.S. From my own observations and experience, I would be surprised if the actual number exceeded that.

Question: Do you know any enlightened beings? How do you know they are enlightened?

This is an indication of the rarity of enlightenment. To the seeker, this might be depressing, but in response to that, Ramesh has said the following:

> "Whether you are a seeker or not is not your choice. Whether enlightenment happens in that body-mind organism or not is also not your choice. So continue to do what you think you have been doing, within your own standards of morality and discipline, and enjoy life" (Composite of many statements in *Your Head in the Tiger's Mouth, 1998*)."
>
> "Enjoying life to me means accepting whatever is, sometimes happiness, sometimes unhappiness", (*Echoes of Consciousness*, video tape, 1999)."

For more discussion of acceptance, see Chapters 19 and 22.

In the meditation of February 15 in *A Net of Jewels* (1996), Ramesh says,

> "The surest signs of spiritual progress are a lack of concern about spiritual progress and an absence of anxiety about liberation."

17.7. How is peace realized?

On p. 49 of *I Am That* (1984), Nisargadatta says,

> "Nothing of value can happen to a mind which knows exactly what it wants. For nothing the mind can visualize and want is of much value."

Although enlightenment is rare, the end of suffering need not be. It will end when it becomes apparent that striving for either enlightenment or happiness is futile because enlightenment is not a thing that can be achieved, and happiness, like everything else in the world, is fleeting (see the quote for May 20 in Section 17.3). However, peace is neither happiness nor unhappiness. It underlies happiness and unhappiness, excitement and boredom. Because it is timeless, it must be realized now if it is to be realized at all. It cannot be realized in the future or the past because they are nothing but concepts and do not exist.

How can suffering end? Since suffering is to want what we don't have, then peace is to welcome what we do have (see also Chapter 22). Since what we have changes in every moment, what we welcome must also change in every moment. Thus, peace in every moment is to welcome what we have in every moment even as it changes from moment to moment. This may be frightening to those who still think they have some control and can stop change. But because there is no doer, we cannot get what we want and we cannot stop change. If it sometimes happens that we do get what we want, it is never because of anything we do--it is because it had to happen (see Section 17.2). Paradoxically, the only way we can get what we want is by welcoming only what we get, including all of our thoughts, feelings, emotions, sensations, and perceptions (this also can only happen spontaneously).

Exercise: Imagine getting everything you want. Would this bring you peace? Now imagine welcoming everything you get. Would this bring you peace?

17.8. An exploration of nonvolitional living (1993), by Galen Sharp (from http://www.beyond-the-illusion.com/files/Altered-States/Consciousness/volition.txt)

> "Nothing perceived can be me or mine": Sri Nisargadatta Maharaj
> "Cease identification with all phenomonality": Wei Wu Wei

Why are we so unhappy? Because not everything goes our way. Because we dread doing the things we don't want to do, but have to do. And we can't do many things we want to do. All this boils down to the fact that we feel we are a person with desires that conflict with our circumstances and our responsibilities. In other words our 'volition' is not always in line with what is happening or what should be done. An understanding of what-we-are and what the mind is can free us from this false sense of volition and remove the burden of our responsibilities. Then, we actually will be happy. Without even trying!

1. You are not the mind.

We have been taught that the mind is ourself, thinking.

We cannot be the mind because we are what is perceiving the mind. Look for yourself right now! You are looking at thoughts from a higher (prior) level. We cannot perceive ourself just as our eye cannot see itself because it is what is looking. The mind cannot be ourself. The Chinese Ch'an master Hsi Yun (Huang Po) said, "A perception cannot perceive." So, are you the perceptions (thoughts and feelings) or what is perceiving them?

We feel we are the mind because of the way the mind itself works. The mind understands things by comparing perceptions and creating objective concepts of them so it can compare one concept with another. This is knowledge. Naturally, it soon creates a concept of itself as 'me' and there the trouble begins. Thus, the mind associates the sense of 'me' with its operation and with the body and we believe and feel we are an individual, thinking, acting entity. This is the origin of all our suffering. Once we feel we are an individual we begin to see and evaluate everything as it relates to us as an individual. We become a thing in a universe of things. A very small, vulnerable, but supremely important (at least to ourself) individual, in a vast, infinite, seemingly purposeless, uncaring cosmos. We lose our original, true sense of identity with the Absolute.

2. The mind goes its own way

By watching our thoughts over a period of time, we can see that the mind is operating literally 'by itself '. Thoughts 'just appear' and keep on appearing automatically. We have this feeling that it is 'me' who is thinking, but this is just a conditioned reflex caused by the concept of ourself as an individual. By watching thoughts we can see how they appear unbidden, uncalled. Just try not thinking for a even a few seconds and see that it is impossible. No 'me' is controlling them. We may have the illusion of purposely thinking about a particular subject, but notice that the idea to purposely think about something comes by itself. Then we do it, automatically, but with the false feeling we are the 'decider'. That feeling of being the 'decider' is not us, it belongs to the mind. It is something we are perceiving.

This is not proven in just a few minutes of thought watching. It often takes many months of diligent watching to really see it and to be convinced. This is because the conditioned feeling of being the 'thinker' is so deep that the very idea that the mind goes its own way seems ridiculous. But the payoff of this single discovery is enormous in terms of liberation and deeper understanding of ourselves and the universe.

The very idea that the mind is operating by itself is unacceptable for most people because it seems to remove the control of the mind from the individual and allows the individual to cease accepting responsibility for his actions. Then they will do all the 'bad' things they want. This is a valid reason from the point of view of an 'individual'. Actually, because the mind conceives of itself as an individual, it uses this fear of harm to itself or reward for itself as a form of inhibition to keep from doing things that would be 'wrong' (ultimately harmful to it or to its image of

itself). However, this is not you, it is the mind regulating itself. This is where feelings of bondage and frustration come from. Because the mind conceives of itself as an individual, it accumulates conflicting needs and desires. The purpose is not just to release the inhibitions that keep us under control, but to dissolve the mind's illusion of itself as an individual in charge of and identified with the mind. That will, at the same time begin to dissolve the inhibitions as well as the need for them because the conflicting needs and desires will go with the illusory self!

3. You are not the doer.

You have never done anything! Because the mind has conceived itself to be an individual it also conceives of itself as the Thinker and also the 'Actor' or 'Doer'. Yet it is not anyone. The mind is not a 'thing' or entity but a process. The thinking process. Simply a process that is happening automatically, the same as the heart is beating automatically. This is why we cannot live the perfect life even though we have been taught how a 'good' person should act. We know we shouldn't get angry at our spouse or our children whom we love, but despite the greatest resolve, we still do. Why? Because we are not the thinker of our thoughts nor the doer of our actions. Because they are not our thoughts or our actions. We are not even the experiencer of the experience. What are we? We are what is perceiving the mind and that is not anyone.

We are what is perceiving the doing, but we are not the doer. We never were. We have never done the bad things and we have never done the good things either. Thoughts are affected by the environment (such as this article), inner habits and tendencies, and by the mind's concept of a 'me', but not by any actual 'me'. We are incapable of interfering with the mind. Why? Because there is no one to interfere. We aren't anyone. Thus, we absolutely cannot have any volition. The concept of being an individual is an invention of the mind itself. It is an artifact of the way the mind works. The feeling of volition is an illusion spawned by this concept of 'me'.

We can never find our own will (volition) in any action. Every so called action is actually an automatic reaction of the mind with an accompanying feeling of volition. It is not 'me', it is the mind automatically going its own way! Simply watch the mind. Be aware of it. That's all that can be done because that is all we are doing right now. That is all we ever do. That is all we have ever done. It is the mind that thinks and feels otherwise and we are what is aware of what the mind thinks and feels. We are perfectly open, empty and still. We are not in space or time. We can never be affected in any way. We have no needs or desires whatever. We just shine brilliantly, effortlessly.

We are what perceives what is appearing. In fact, it is because of this perceiving that anything at all appears. What we are is the beingness of what appears. The isness, or the amness, if you will, of the very sense of 'I am'. Another way to put it is that we are the Awareness in which everything appears (the here-now, the sense of presence, consciousness). See that we are simply and only the awareness of the mind while it goes its own way. Every sensation and feeling it has belongs to it, to manifestation ... not to ourself. With everything that appears in any way, we can say 'Not me, not me.'

We are the Watcher, not the thinker, or the doer, or the experiencer.

Once this is deeply and completely understood, the mind can let go of its sense of volition and its sense of being an individual, relax and just be knowledge. Everything happens by itself. Everything happens as it should. Everything happens as it must.

When the mind lets go of its sense of self and volition there is the deepest sense of complete peace and fulfillment. It is the Bliss spoken of by the ancient masters. All fear disappears.

We are now looking from our true Source (as we always were but didn't realize) the timeless, spaceless Absolute. The unmanifest. This is what we all are. This is the ultimate source of our light of awareness. We are perceiving the manifest from its source, the unmanifest and it unfolds spatially and temporally as it eternally IS.

Chapter 18. Practices and teachers

18.1. Why practice?

On p. 8-9 of *Mindfulness in Plain English* (1994), Buddhist teacher Bante Henepola Gunaratana says,

> "Go to a party. Listen to the laughter, that brittle-tongued voice that says fun on the surface and fear underneath. Feel the tension, feel the pressure. Nobody really relaxes. They are faking it. Go to a ball game. Watch the fans in the stands. Watch the irrational fit of anger. Watch the uncontrolled frustration bubbling forth that masquerades under the guise of enthusiasm or team spirit. Booing, catcalls and unbridled egotism in the name of team loyalty. Drunkenness, fights in the stands. These are people trying desperately to release tension from within. These are not people who are at peace with themselves. Watch the news on TV. Listen to the lyrics in popular songs. You find the same theme repeated over and over in variations. Jealousy, suffering, discontent, and stress. Life seems to be a perpetual struggle, some enormous effort against staggering odds."

Question: Does this paragraph remind you of anyone you know?

What is described in the above paragraph is not living--it is surviving. But spiritual practice can transform a life of survival into a life of peace.

Suffering is intrinsic to the dream because of the perception of pervasive conflict and potential war between the split pairs. From the point of view of the individual, the purpose of all spiritual practice is to awaken from the dream of suffering. Since the basis of all splits is the ego, or illusory "me", awakening means to see that there is no "me". However, expecting the ego to see this is like asking something that does not exist to see that it does not exist. Spiritual practice does not get rid of the ego because there is no ego to get rid of.

Awakening can only happen by seeing from outside the split that there is no split. Since the essence of the ego is the false sense of personal doership, awakening means to see that there is no doer and there is no choice. Paradoxically, awakening is usually preceded by considerable effort but it is never that of a doer. For practice to happen, intense earnestness and intention are usually necessary. (Of course, if they are supposed to happen, they will. If not, they won't.) An immediate and lasting benefit of practice is that, even before awakening, our understanding of suffering deepens, and this greater understanding is inspiration for further practice and progress.

One misconception that is common among beginners on the spiritual path is that suffering and sacrifice in themselves are useful spiritual practices. (This is undoubtedly reinforced by the biblical story of Jesus suffering for our sins, and the suffering of the Christian martyrs.) However, since separation is the basis of suffering, seeking to suffer in the hopes of finding spiritual truth in it can only increase the sense of separation, and thereby increase suffering. Only the individual can suffer. The one good thing about suffering is that its presence tells us that we are still not identified as our true nature. In this way suffering is actually our guide to freedom from suffering. Every instance of suffering is another opportunity to realize what we

are.

Question: Have you ever known anyone who thought that suffering and sacrifice in themselves were useful spiritual practices?

18.2. The importance of being aware

We are not individuals; we are pure Awareness/Presence (see Sections 9.3, 11.10, 14.3). It is because we transcend the ego that we can see that it does not exist, and we can be aware that the effort to see that it does not exist is not our effort.

Bondage and suffering are due to the belief that we are separate. To be effective, any practice depends on the increasing awareness of this belief. For this reason, spiritual practice is better termed awareness practice. When the seeker understands that suffering is the direct result of a belief in separation, there is a strong incentive to become aware of it. Thus, becoming aware of the connection between a specific suffering and the identification from which it springs is a valuable, even necessary, awareness practice and is the first step to becoming disidentified and free.

We saw in Chapter 11 that we can distinguish between three levels of identification. The first is identification with the body-mind organism without any sense of personal identity. This identification is necessary for the organism to function and survive, and causes no suffering because there is no entity to suffer. We are not concerned with this identification in this course--in fact, it is the state of being awakened. The second level is identification with the "I"-concept, which produces the illusory entity with a sense of personal doership. The third level is identification with various thoughts, images, and emotions, resulting in the sense of ownership of them, so they become "my" thoughts, "my" self-images, "my" emotions, and "my" suffering.

Disidentification at the third level means becoming aware of all of our thoughts, images, feelings, emotions, and sensations, and accepting them rather than resisting them. This is the key to the beginning of the end of suffering. This can happen while still retaining the image of the self as doer. Thus, at this level, it is unimportant whether the seeker still thinks of him/her self as the doer.

The first step in disidentification at the third level is to use a specific experience of suffering as the impetus to become aware of the real source of that suffering. For example, if "I" feel angry because "I" think "I" have been victimized by somebody, my first step is to become acutely aware of the anger and the associated thoughts, images, and body sensations. As was discussed in Section 11.7, anger at being victimized always comes from seeing an image of myself as being helpless, and another image of the victimizer as having some kind of power over me. Neither side of the polar pair can exist without the other. Both are nothing but mental images.

Exercise: Close your eyes and watch your thoughts come, change, and go. Look for the owner of the thoughts. Can you find one?
Now watch your feelings and emotions come, change, and go. Look for the owner of the feelings and emotions. Can you find one?

Now watch your body sensations come, change, and go. Look for the owner of the body sensations. Can you find one?

Now, where does a feeling of helplessness, which is the essence of victimhood, come from? It may come from the thought that there is something "wrong" with "me" for being so helpless. Thus, we see that this experience of suffering may have as its roots identification with a self-image of defectiveness or unworthiness.

Exercise: Close your eyes and look for the thinker of your thoughts. Can you find one?
Now look for the feeler of your feelings. Can you find one?
Now look for the experiencer of your body sensations. Can you find one?

There are two important lessons to be learned from these exercises. The first is that the image I see of myself as victim means that I cannot be the victim! I am what is aware of the image, so I cannot be the image! This is the most fundamental step that anybody can take in liberation. Whatever I am aware of cannot be me because I am what is aware! This one realization is enough to produce a gigantic crack in the bonds of bondage.

The second important lesson is just a generalization of the first. Since nothing that I see can be me, there is no object, thing, or entity that can be me. I am not a person, not a mind, not a body, not a being, not a thought, not a feeling, not an emotion, not an image, not an observer, not anything. And most importantly, I am not a doer, not a thinker, not a decider, and not a chooser. Now we have progressed to liberation at the second level.

If I am not anything, then what am I? The answer is simple: I am pure Awareness/Presence that is aware of all things and is present in all things. What could be more simple, and yet so profound and so liberating?

Exercise: This exercise is the essence of all spiritual practice. It helps us to identify with our true nature, which is Awareness, rather than with any thoughts, feelings, emotions, sensations, or perceptions. When we identify with Awareness, we are immune from all changes because Awareness never changes. When we identify with thoughts, feelings, emotions, sensations, and perceptions, we are subject to their constant changingness.
First, become aware of anything in the mind that is changing, like a thought, emotion, or body sensation. Can you realize that, if it is something that you are aware of, then you cannot be it because you are what is aware of it?
Second, if you are what is aware of it, what are you really? Look and see!

18.3. Some sages and the practices they teach

There are innumerable types of awareness practice, covering a broad spectrum, and different spiritual masters teach different types. Ramesh Balsekar (deceased 2009, who lived in Bombay, India) and Nisargadatta Maharaj (who lived there also) are at one extreme of the spectrum, and teach that any effort by the individual to achieve something will only reinforce the sense of personal doership, which is the essence of the individual. They teach that understanding the absence of the individual is of primary importance, and, indeed, it is the spontaneous deepening of this understanding from the intellectual level, to the level of intuitive

seeing, to the level of awareness of our true nature, that is the process of liberation.

Ramesh, however, does teach that, in order for the understanding to deepen, it is necessary to see its validity in one's own experience. This is a practice, but one that does not reinforce the sense of personal doership (see, e.g., his 1998 book, *Your Head In the Tiger's Mouth*). He recommends simply to watch and see that all decisions and actions happen by themselves, so there can be no decider or doer. Ramesh also emphasizes that the acceptance of, or surrender to, what-is is equivalent to the disappearance of the sense of doership (see Section 19.2).

Ramesh, on pp. 170-171 of *The Final Truth* (1989), divides spiritual aspirants into three classes: a) the advanced ones who require only a simple teaching about the nature of identification and of the individual in order to realize the Self, b) the not-so-advanced ones who require some effort and time before realization (although this effort, as always, is never by an individual), and c) those who require many years of spiritual instruction and practice before realization. For the first class, no practice is necessary. Just receiving the proper teaching, in one form or another, is sufficient. The third class of aspirant is the one for whom an interest in practice has just begun. These people have just realized that "there must be a better way," or "there must be more to life than this," and they must seek and find the teachers and practices that are right for them.

Question: Which class of aspirant are you in?

For the intermediate class described above, Ramesh sometimes mentions the practice of inquiry, which Ramana Maharshi taught in Tiruvannamalai, India. This is a "direct approach" because it directly confronts the only problem that exists, that of the illusion of the individual. The investigation into the existence of the individual is a practice that avoids reinforcing the concept of the individual, and leads to the direct realization that there is no individual.

In the meditation for November 15 in *A Net of Jewels* (1996), Ramesh says,

> "The hazard of any kind of disciplinary practice or meditation is that the means and the end generally get utterly confused. Some seekers end up in frustration when they find that long years of such practice have brought them nothing, whereas others may go along the Pathless Path and reach the Destination Which Is No Destination almost effortlessly, while yet others fall by the wayside having mistaken some puerile spiritual power as the ultimate goal. The subtle and fundamental fact that is most often missed is that the means and the end are one and the same, and that the only means to Truth is Truth itself -- Understanding is all."

Several contemporary sages teach inquiry. Among them, Poonjaji (also called Papaji, now deceased, http://www.papaji.com/) of Lucknow, India; Francis Lucille of Temecula, CA; Rupert Spira of London; and Greg Goode of New York City teach their own versions of it. Poonjaji considered himself to be a direct disciple of Ramana Maharshi (although Ramana Maharshi claimed that he had no disciples). Gangaji (http://www.gangaji.org/), of Ashland, OR, is a direct disciple of Poonjaji, and she teaches his version of inquiry.

At times, Nisargadatta Maharaj (http://www.nisargadatta.net/), who was Ramesh Balsekar's

guru, taught inquiry and at other times did not, depending on the state of consciousness of the student. While Ramesh (http://www.rameshbalsekar.com/) describes inquiry in detail in *The Final Truth*, he rarely mentions it in his later books, and he only occasionally suggests it as a practice in his seminars because he prefers to emphasize the understanding and how it deepens. However, he often uses it himself in his dialogues by asking, e.g., Who is asking the question? or, Who is seeking? to get the student to see that there is no "you" that can do anything.

The purpose of inquiry is to see that there is no "I" and to focus the attention on our true nature (pure Awareness/Presence). Inquiry was discussed briefly in Section 10.2 and will be described in more detail in Chapter 23.

Ramana Maharshi taught that there are only two practices that are effective in preparing for the disappearance of the individual--inquiry (the path of the jnani) and surrender (the path of the bhakta) (see Section 10.3). Whereas Ramesh teaches that surrender is equivalent to acceptance of what-is (see Section 19.2), Ramana taught that surrender could include devotion to the guru, who, because there is no entity, in reality is none other than the Self. In fact, while bhaktas may find that their devotion is directed initially to the guru, they later see that it becomes an expression of all-encompassing, divine love (see Chapters 16, 19, 25).

Terence Gray, a sage, Irish aristocrat, and scholar who wandered the Himalayas before his death in the 1980s, published several important books under the pseudonym, Wei Wu Wei. His books, like Ramesh's teaching, emphasize the importance of the deep understanding of the absence of volition and of the "I". Ramesh has stated that he has read one of Wei Wu Wei's books, *Open Secret* (1970), at least a hundred times (*Consciousness Writes* (1998) private distribution). I have found that *Open Secret* and another one, *Posthumous Pieces* (1968), are both extremely powerful and succinct metaphysical pointers to Reality.

In addition to inquiry, Ramana Maharshi and many other masters teach meditation as an awareness practice. There are myriad techniques for meditation (see Chapter 24), but from our previous discussions, we can say that if meditation is to be fruitful, it must lead to transcendence of the sense of being an individual.

The Buddha said, "Rare in this world are those who enjoy freedom from mental illness even for one moment" ("*What the Buddha Taught* (1959) by Walpola Rahula, p. 67). He was referring to the afflictions that cloud all but enlightened minds. For this "illness", he prescribed two types of meditation, concentration and mindfulness (see Sections 14.5, 14.6, Section 24.2). These types of meditations are not cut off from life, nor do they avoid life. On the contrary, they are all connected with our life, our daily activities, our sorrows and joys, our words and thoughts, and our moral and intellectual occupations.

In addition, at a minimum, as a training in morality, a Buddhist vows to observe the Five Precepts (from *What The Buddha Taught* (1959), by Walpola Rahula, p. 80):

1. Not to destroy life.
2. Not to steal.
3. Not to commit adultery.

4. Not to tell lies.
5. Not to take intoxicating drinks.

These have been elaborated on in many Buddhist publications.

Since the second half of the twentieth century, Buddhists and Buddhist teachers have come in increasing numbers to the West. Many of these have been refugees from conflict. After the Chinese takeover in 1959, many Tibetans fled from their country. The wars in Indochina in the 1950s and 1960s led many Vietnamese people to move to and settle in Europe, Australia and America. Other Buddhists from countries such as Thailand have established businesses in the larger Western cities. They have brought their Buddhist beliefs and practices to their new homes, and have helped to set up Buddhist centers.

Many Westerners have trained in Buddhism in monasteries in India and Southeast Asia, and have returned to the West to teach. For example, *The Insight Meditation Society* was founded by three Westerners, Joe Goldstein, Jack Kornfield, and Sharon Salzberg. Its website (http://www.dharma.org) now lists 59 teachers.

Among contemporary Christian sages, Frs. William Meninger and Thomas Keating, now at St. Benedict's Monastery in Snowmass, CO, and Fr. Basil Pennington (now deceased), have revived a 14th century anonymous manuscript entitled "*The Cloud of Unknowing*". The following is an editorial review from www.amazon.com of William Johnston's version of the book:

> *"God can be loved but he cannot be thought. He can be grasped by love but never by concepts. So less thinking and more loving."*
>
> This is William Johnston's summary of the message of *The Cloud of Unknowing*. Nobody knows who wrote the book, or exactly where he lived, or whether he was a member of a religious order, or even, really, whether he was part of any church at all. The text first appeared in Middle English in the 14th century, and it has inspired generations of mystical searchers (from St. John of the Cross to Teilhard de Chardin). The mysterious conditions of its composition, however, focus the reader's attention squarely on the book's message--an almost Zen rendering of Christianity, which has a great deal to teach our querulous, doctrine-obsessed churches: "And so I urge you," the author writes, "go after experience rather than knowledge. On account of pride, knowledge may often deceive you, but this gentle, loving affection will not deceive you. Knowledge tends to breed conceit, but love builds. Knowledge is full of labor, but love, full of rest." --*Michael Joseph Gross*

Frs. Menninger and Keating have devised a form of meditation which they call centering prayer that is without doctrine and is aimed at opening to God's Presence (see http://www.amazon.com/Cloud-Unknowing-Privy-Counseling-Original/dp/0385030975/ref=sr_1_2?ie=UTF8&s=books&qid=1244574676&sr=1-2).

In Advaita, the traditional path to enlightenment is through instruction by the guru in the practices of inquiry and surrender, preferably within monastic life; and through intensive study of the Vedas and Upanishads (see the interview with Swami Dayananda Saraswati at http://www.enlightennext.org/magazine/j14/dayananda.asp?page=2). In Buddhism, it is

through the teachings and practices of the Buddha as taught by an experienced monk or nun in a monastery or on prolonged retreats. In Christianity, it is through the practice of Agape and of worshipping God. Advaita and Buddhism present difficulties to Westerners because of the need to spend long periods away from home, family, and work. Christianity has the difficulty that it is intrinsically dualistic since God and man are assumed to be separate, even in heaven. In all of these traditions, monks and nuns have depended on the generosity of lay people for their survival in return for being given the teachings. There does not seem to be any way past or through these difficulties except to accept them.

Many people in Western society are too impatient, and their lives too busy, for long periods of retreat. Consequently, during the last few decades, a form of Advaita called Neo-Advaita, has sprung up to accommodate them. Neo-Advaita teaches that enlightenment does not require long periods of training and discipline, but can happen right now, given the proper teacher and teaching. Neo-Advaita practice consists primarily of satsang with enlightened teachers, reading their writings, and viewing their videos (e.g., Francis Lucille (http://www.francislucille.com/), Adyashanti (http://www.adyashanti.org/), Scott Kiloby (http://www.kiloby.com/), Charles David Hayes (http://beingisknowing.blogspot.com/), Tony Parsons (http://www.theopensecret.com/), "Sailor" Bob Adamson (http://members.iinet.net.au/~adamson7/), John Wheeler (http://thenaturalstate.org/), Candice O'Denver (http://www.greatfreedom.org/), and Rupert Spira (http://www.rupertspira.com/)). (The fact that all modern sages have websites is one of the miracles of this technological age.)

Another Advaita teaching, called the direct path, was taught by the sage Sri Atmananda (Sri Krishna Menon, 1883-1959) and is now taught by the present-day sage Greg Goode (http://www.heartofnow.com/). This path, like Neo-Advaita, avoids the years of preparatory practice, like meditation and studying the ancient scriptures, of traditional Advaita. It is intended to bring the aspirant quickly to realization of the Self through studying and absorbing the short treatises *Atma Darshan* and *Atma Nirvriti* of Sri Atmananda.

There are many other practices. A course like this is best suited principally for obtaining an initial understanding of the metaphysics of nonduality, which itself is an awareness practice, and for becoming familiar with the practice of inquiry and its variants. Further evolution will occur during a possibly lifelong journey that may include other practices as well. At some point in the journey, most people find that association with a Self-realized master is necessary for further progress. However, as with everything else, if practice happens, it happens, it it doesn't, it doesn't.

18.4. Who or what is it that practices?

The functioning of the nervous system is analogous to the programming of a computer (see Section 5.15). The programming of the nervous system depends on both its genes and its conditioning. All of a body's actions are governed by the nervous system's responses to stimuli, and every new stimulus adds to, or modifies, the existing programming. A stimulus may arise from the nervous system (internal stimulus), or it may come from outside (external stimulus). An internal stimulus can come from conscious memory, from unconscious conditioning, or from instinct. An external stimulus can come from receiving a teaching, or it can come through nonlocal mind (see Section 5.2, 9.4, 12.1, 12.2). An exceedingly important part of nonlocal mind is spiritual intuition, which is the link between the mind and

Reality. (Spiritual intuition is what drives the individual to seek to know Reality, see Chapter 16 and Section 17.3).

Many people become confused when they are told at one moment that there is nothing they can do, and at the next moment that they may benefit by following certain practices. Naturally they ask, if we can do nothing, who or what is it that practices? The paradox of spiritual practice is this: We must do it in order to see that we are not doing it! Nobody practices because there is no doer to do it, but if practice is to happen, the thought of it must be in the brain-mind first. This must usually come from outside the brain, and that is the function of a teaching like this. If the idea is received and is compatible with the brain's programming, practice may happen. If not, it probably won't. This is no different from any other type of behavior. You have never done anything because there is no you to do it.

Question: Do you have a spiritual practice? Was it your idea? If so, how did the idea arise? If it wasn't your idea, where did it come from?

18.5. Some possibly helpful tips

At this point, I will list some observations I have made about teachers and practices. However, be warned that this is not science, and others may disagree, so you should make your own observations and draw your own conclusions.

1. Teachers teach what worked for them. It may not work for you.

2. It is unlikely that a teacher who has never engaged in spiritual practice will be able to suggest a spiritual practice to help you to end your suffering, no matter how genuine his enlightenment. (An exemplary exception to this was Ramana Maharshi.) The same thing is probably true of a teacher who has never suffered to any significant degree.

3. Some practices can and do relieve suffering, even though they may not lead to enlightenment. An analogy is that aspirin may relieve a headache even though it may not remove the cause. (Of course, we must remain aware that it is not the practice that relieves suffering. If suffering must stop, it will stop, though practice usually precedes it.)

4. At some point, liberation requires going inward far enough to be able to see every object of awareness. It then becomes clear that you are not an object of awareness, but pure Awareness itself, as discussed in Section 18.2 above. This may have to be repeated many times.

5. The teachings of teachers who have responsibility for managing and maintaining ashrams or spiritual centers are likely to be aimed at a larger audience than those who do not, because supporting an ashram requires large amounts of volunteer effort and substantial financial commitments from the disciples. Consequently, such teachings will generally be designed for maximum acceptability. Even teachers who have only small followings, but who depend on their contributions for survival, sometimes will color their teachings to avoid losing their followers. On the other hand, the purest teachings usually come from teachers who are not surrounded and supported by followers or an organization. A good example of such a teaching is Wei Wu Wei's books, which focus on one point and one point only—the absence of the

individual “I”. As a teacher, he led an obscure life, and his books have never had a wide audience. Compare him to Sai Baba who has many tens of thousands of disciples and several ashrams, and who utilizes materializations to attract attention. His teaching emphasizes discipline and selfless service (karma yoga). This is more acceptable and understandable to large numbers of people than is the teaching that there is no individual.

6. In the course of investigating various spiritual teachings, the seeker will find that a teaching and teacher must be acceptable if they are to be helpful. The natural inclinations of each personality will self-select between the enormous variety of teachings and teachers. A person who is naturally service oriented will probably be moved to do karma yoga in an ashram or spiritual center. A person who is devotional by nature will probably find a teacher who can symbolize God for him or her. The intellectual will probably be drawn to a jnani whose intellect matches his or her own. Of course, personalities come in all forms and mixtures, so who will be attracted to what or whom is an individual matter. Furthermore, a particular teaching and teacher need not be a lifetime choice for a person. As Ramesh says, it is perfectly all right to go “guru shopping.”

7. Very few teachers give their teaching a metaphysical basis. Of the ones that I know, only Ramesh and Wei Wu Wei consistently do. For those who appreciate metaphysics, its logical and intellectual structure makes the teaching more understandable and therefore more acceptable. For that reason, a teaching with a metaphysical basis is generally more suitable for an academic course than one without it. However, this in no way implies that a metaphysically based teaching is best for everybody or even for most.

8. The occurrence of awakening in a body-mind organism leaves the conditioning of the organism essentially the same. In other words, the basic personality is unchanged by awakening. Hence, if the organism was “not nice” before awakening, it also will probably not be nice after awakening. If it had a lust for power before, it will probably also have it after. If it was not a good teacher before, it likely will not be a good teacher after. This makes finding an acceptable teacher all the more difficult. However, all genuinely enlightened beings have compassion for all of their fellow beings because they see no separation between them.

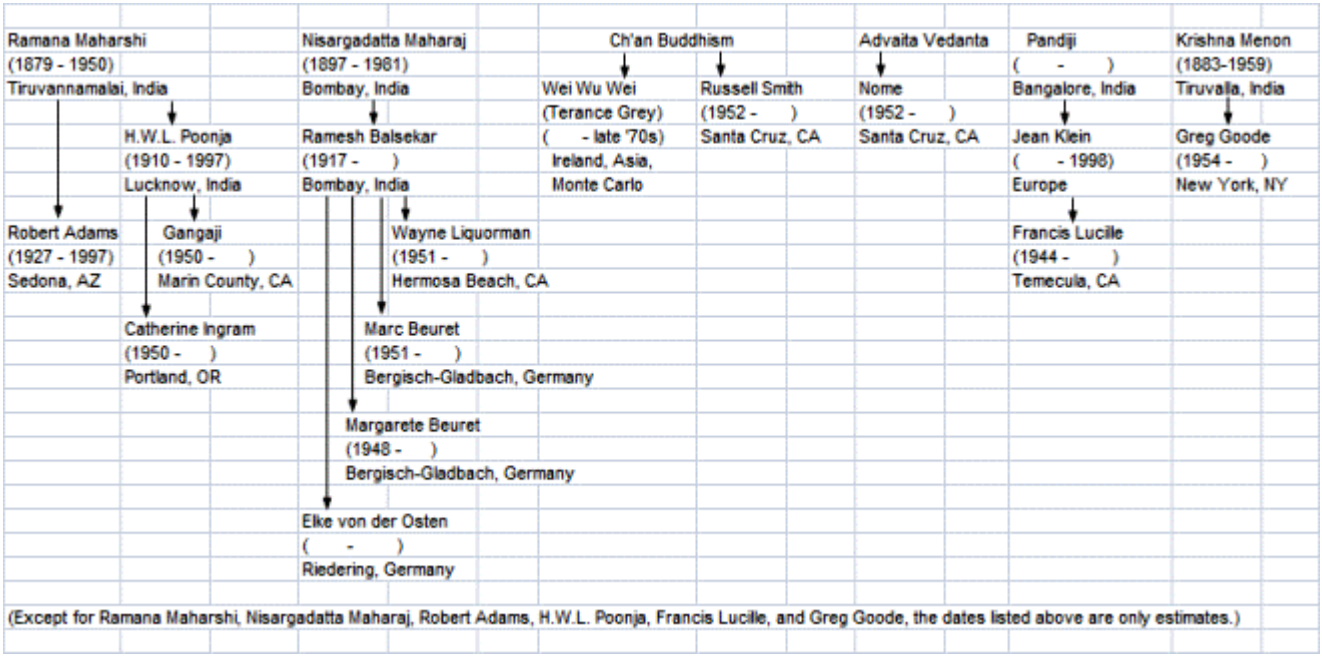
9. Many people judge the behavior of a guru using their own standards, which, of course, are those of the ego. This is similar to creating a god in one's own image and then expecting the god to live up (or down) to that image (see Section 14.2). When the guru's behavior disagrees with the image, the student often becomes disgusted and then accuses the teacher of not being enlightened. However, just as there is no objective test for consciousness (see Section 5.5), there is also no objective test for enlightenment. So how does one select a teacher? The only valid criterion is whether the teacher is able to help the student reduce his/her own suffering. If so, the teacher is a genuine one for that student as long as the student is being helped. If this is no longer the case, it is best for the student to find another teacher.

10. Some teachers, including both a bhakta like Gangaji and a jnani like Francis Lucille, emphasize the value or even necessity of spending time (called satsang) in the presence of the guru in order for transmission to occur. My own intuition is that, if the necessity of being with a guru seems like a "should" to you and feels like an obligation, it will not help you and will only increase your suffering, but if it feels like an opportunity to stop stagnating and to

experience more clarity, it will help you towards liberation. If it is a mixture, just remember there is no "you" who ever decides anything.

11. Some spiritual organizations require secrecy pledges and/or teach proprietary systems of thought and practice. While proprietary techniques may yield some benefit, one suspects that exclusionary policies are designed more for the power and privilege of the teacher than for the enlightenment of the student. Such strictures seem contrary to our intrinsic freedom, and there are plenty of legitimate teachers who do not impose them. Your true nature cannot be a secret, and Self-realization cannot be bought or sold.

18.6. Some of the contemporary sages of nonduality who have followed the tradition of Advaita



Chapter 19. Surrender, mantra, and trust

19.1. Surrender and mantra practice

According to Ramana Maharshi, either surrender or inquiry is always the final practice. He often talked about others, but said that in the end all others must evolve to one of these before Self-realization can occur. Simply asking God for help is a useful practice if it opens the mind to something new and results in relinquishing the sense of control. However, the biggest obstacle to surrendering to God is the ego's fear of losing control even though it actually has no control.

Question: Have you ever asked for help from God? Did you feel relief?

Surrender to God has even greater benefits when dealing with the debilitating afflictions of every-day life. For example, the well-known 12-step programs for recovery from every known form of addiction and addictive behavior are based on surrender to God. These programs are

the only ones that consistently and reliably promote recovery without the use of drugs (which can cause their own addictions). The necessity to surrender to God is made clear in the first three of the twelve steps:

> 1. We admitted we were powerless over [our addiction] ---that our lives had become unmanageable.
> 2. Came to believe that a power greater than ourselves could restore us to sanity.
> 3. Made a decision to turn our will and our lives over to the care of God as we understood him.

Question: Do you know somebody who is or has been in a 12-step program? Did it help?

If we believe that God is separate from us, surrendering to God is dualistic. In Christianity, surrender is epitomized by the following passage from Luke 22:42 (RSV, http://quod.lib.umich.edu/cgi/r/rsv/rsv-idx?type=DIV1&byte=4782437):

> "... not my will, but thine, be done."

On pp. 177-178 of The Final Truth (1989), Ramesh points out that dualistic surrender strengthens the sense of separation if there is a worldly motive or goal behind the surrender (e.g., making a deal with God to get something you want). He then states that the only true surrender is when there is no “one” to ask questions or to expect anything. He describes it as the surrender [to what-is] of the total responsibility for one’s life including all thoughts, feelings, and actions, which means that there can be no individual will or desire, although will and desire may arise impersonally.

Also, in the meditation for February 1 in *A Net of Jewels* (1996), Ramesh says,

> "True surrender means in effect the acceptance of the fact that there is no individual entity with the ability to act independently of God or the Self."

Question: Have you ever tried surrendering to God? What was the result?

Ramana Maharshi advocated a form of surrender which he called *Nama-Japa*. Following is a description of this practice taken from pp. 124-25 of *Be As You Are* (1985) by David Godman:

> "Surrender to God or the Self can be effectively practiced by being aware at all times that there is no individual ‘I’ acting and thinking; only a ‘higher power’ which is responsible for all the activities of the world. Sri Ramana Maharshi recommended Japa as an effective way of cultivating this attitude since it replaces an awareness of the individual and the world with a constant awareness of this higher power.
>
> In its early stages the repetition of the name of God is only an exercise in concentration and meditation, but with continued practice a stage is reached in which the repetition proceeds effortlessly, automatically and continuously. This stage is not reached by concentration alone but only by completely surrendering to the deity whose name is being repeated:

> 'To use the name of God one must call upon Him with yearning and unreservedly surrender oneself to Him. Only after such surrender is the name of God constantly with the man'.
>
> When Sri Ramana Maharshi talked about this advanced stage of Japa there was an almost mystical dimension to his ideas. He would speak of the identity of the name of God with the Self and sometimes he would even say that when the Self is realized the name of God reappears itself effortlessly and continuously in the Heart."

Nama-Japa can be practiced simply by repeatedly thinking the mantra, "God". This powerful practice helps us to see that everything is God (see Section 14.3) and there is nothing but God. It fills us up with immanent God and expands us outward with transcendent God. Whenever we feel alone, empty, separate, or incomplete, the thought of God can bring us wholeness and completeness.

Exercise: Use the mantra "God" for a few days. Do it mindfully! What is your experience?

On p. 212 of *Be As You Are,* Ramana Maharshi says,

> "Good, God, Love, are all the same thing. If the person keeps continuously thinking of any one of these, it will be enough. All meditation is for the purpose of keeping out all other thoughts."

In Section 14.3, we found that we are God. In Section 16.2, we found that we are Love, Now we see that Good, God, and Love are all the same thing. Thus, we are all God, Good, and Love.

Exercise: Think "Love" and flood yourself with light (see Section 16.4). Now, think "Love" and flood yourself and somebody who annoys you with light. How does this practice affect your feelings about yourself and the other?

[Note: The mantra is a short, powerful spiritual formula for connecting us with the All--whether we call it God, Reality, or our True Nature. Whatever name we use, the mantra calls up what is best and deepest in ourselves. The mantra has appeared in every major spiritual tradition, West and East, because it fills a deep, universal need in the human heart. Mantras originated in the ancient Vedic religion of India, later becoming an essential part of the Hindu tradition and a customary practice within Buddhism, Sikhism, and Jainism. In Hinduism, the most famous mantra of all is "Aum" (or "Om"), which represents primordial creation. (The Biblical verse John 1:1 can be interpreted nondualistically as a pointer to the sound of creation: "In the beginning was the Word, and the Word was with God, and the Word was God.") Hear Aum being intoned at http://www.thaiexotictreasures.com/chants_mantras.html, at http://www.nmcnews.org/music/om1.html (>om--the realm of calm), and at http://www.youtube.com/watch?v=EzqZ3qW7YAk. Many mantras in both Hinduism and Buddhism begin and/or end with "Om". An example in Hinduism is, "Om Namah Shivaya", which means "I bow to the Shiva (God) within". Hear it being chanted at http://www.youtube.com/watch?v=AczOmID4tPA, at

http://www.babaji.net/audio/omnamahshivaya1.mp3 , and at http://www.youtube.com/watch?v=uxU2cPQEPB0. In Buddhism, the most famous mantra is "Om mani padme hum", which is a salute to the Buddha within (hear it being chanted at http://www.circle-of-light.com/Mantras/om-mantra.html). Sufism has the chant "Ishq Allah Mahbud Lillah", which means "God is Love, Lover, and Beloved" (see Section 16.1). Hear it being sung at http://cdbaby.com/cd/maniko and at http://www.youtube.com/watch?v=H3-FfXCFMr4.]

In choosing a mantra, experiment with several to find out how each affects you. Pick one that connects you directly to your True Nature, or whose sound goes straight to your core and resonates there. Those that stay in the head will not be as effective.

Exercise: While you are alone, try sounding the mantra "Aum" over and over. To make it eaier, you can do it while listening to it on a CD or website. What is your experience?

19.2. Ramesh's teaching on surrender

Ramesh does not advocate most practices because such practices appear to be done by an “I”, and therefore the concept of “I” is strengthened by them. Instead, he emphasizes the importance of seeing that there is no doer and no choice. He frequently quotes his guru, Nisargadatta Maharaj, who liked to say, “Understanding is all.”

Understanding necessarily begins at the intellectual level. In order for it to be accepted so that it can deepen to the intuitive level, it must be seen to be valid. This requires the seeker to watch and see directly whether decisions happen by themselves or whether he/she is making them. Likewise, the seeker must see firsthand whether thinking or doing are spontaneous or whether there is a thinker or doer. This is the only practice that Ramesh advocates, and of course, if it happens, it happens; if it doesn't, it doesn't. It is a form of inquiry, which generally can be described as looking to see directly what-is. Inquiry will be discussed more thoroughly in Chapter 23.

Ramesh frequently mentions that, for as far back as he can remember, two notions were always with him: 1) the world is illusory, and 2) everything is determined by destiny. Because of this, understanding must have come quite naturally and easily for him. Such may not be the case for others. Direct understanding requires a degree of disidentification from one's thoughts and feelings that is not often found. Much more common is the case in which identification is so strong that disidentification simply through intellectual understanding is impossible. That is why Ramesh encourages the seeker to see directly whether or not there is a doer. That is also why most teachers of nonduality emphasize inquiry as the most effective practice, at least for individuals on the jnana path. For those on the bhakti path, teachers of nonduality will foster love and devotion to the guru, but they will do so only when it is clear to the devotee that guru, God, and Self are the same. Such is the case with Papaji (now deceased, see http://www.papaji.com) and Gangaji (see http://www.gangaji.org).

There is no difference between acceptance of what-is and surrender to what-is because both imply disidentification from doership. Acceptance of what-is is the absence of resistance to all thoughts, feelings, emotions, sensations, perceptions, and actions (see Section 17.7). Acceptance does not mean that these are not felt, just that there is no "I" identifying with them.

Resistance to what-is is the judgment that it should not be this way, and that we can do something to change it (see Chapter 21). Resistance reinforces the idea of separation and prevents us from seeing that there is really nothing but Consciousness. Therefore, suffering always accompanies it.

Question: Have you ever been told that you might as well "get used to it"? How about to "embrace" it? Could they be forms of surrender?

Ramesh also speaks of witnessing, which is Awareness without identification with doership. In resistance, there seems to be a "me" that is resisting, while in witnessing, there is no "me" and no witness. Thus, we can see that awakening, witnessing, acceptance, and surrender are all equivalent to each other, while resistance and doership are also equivalent to each other.
In the meditation for November 8 in *A Net of Jewels* (1996), Ramesh says,

> "The arising of a thought, emotion or desire is something beyond the control of the organism. The nature of the mind can be either to "take delivery of" and get involved in it or, when the "me" is not there, the arising of it is witnessed and it disappears."

A dramatic example of pure witnessing without a witness can happen when one is startled by something unexpected. An extreme example of this occurs when we are driving and suddenly we become aware that an accident is imminent and inescapable. In that split second, the body reacts instinctively while thinking stops. After the collision, the "I" reappears and may think, "There was nothing I could do". That is more true than the "I" realizes.

Question: Have you ever had such an experience?

In the meditation for May 9 in *A Net of Jewels* (1996), Ramesh says,

> "If the mind watches its own operation, then there will always be comparing and judging: 'This is good, this is bad, this is whatever.' That is not witnessing."

When Awareness identifies with rumination, judging, and thoughts of past or future, there is always suffering. Ramesh terms this the "horizontal" involvement of the mind with its thoughts, feelings, and emotions, horizontal meaning occurring within time. (He refers to the spontaneous awakening from this involvement as a "vertical" appearance from outside of time.) For example, a common experience is one in which a stimulus, either external or internal, causes an unpleasant memory to appear in the mind, triggering the same emotions again. The mind becomes (horizontally) involved with the experience, which is replayed over and over with the purpose of self-justification. This involvement is equivalent to what we called identification at the third level in Section 11.5. The mind takes possession of (identifies with) the victim image and all of its attributes of aggrieved innocence, helplessness, and self-righteous anger.

When we awaken from this horizontal movement, the involvement is cut off. (This is a universal experience in meditation.) As the seeker matures, the involvement is cut off earlier and earlier, until it arises only momentarily before it is cut off. This is the stage just prior to awakening, and is described by Ramesh as the "who cares?" state (see p. 132 of Ramesh's 1999 book, *Who Cares?*).

Daydreaming is a common example of Awareness being identified with thoughts, feelings, and emotions. During this involvement, we are lost in the past or future, and there is no freedom or awareness of being aware. Awakening occurs at the instant that we realize we have been daydreaming. There is no elapsed time in this awakening because it occurs outside of time. This is a moment of pure witnessing in which there is no "me". It is usually followed immediately by the return of the "me" in "normal" consciousness.

Exercise: See if you can see whether there is a "me" present during the transition from daydreaming or ruminating to “normal” consciousness.

Even when we are passively observing our thoughts of judgment, fear, or desire, if there is the sense of an observer being present (see Section 23.2), there is still identification. Nevertheless, each time we are aware that this is happening, identification has weakened, and as the understanding continues to deepen, suffering continues to decrease.

19.3. Trusting Awareness

Pure Awareness is our true nature. It is What-We-Are. Pure Awareness never changes. Everything else does. That is why it makes sense to trust pure Awareness and why it makes no sense to trust anything else. We are conditioned to trust everything and anything except what is trustworthy. Trusting Awareness takes responsibility out of the hands of the ego, which cannot be trusted, and puts it in Awareness, which can be trusted. The proof that Awareness is trustworthy comes with our experience of greater relaxation, peace, and freedom as we trust It.

Exercise: Trusting Awareness requires practice and self-reminding until it becomes automatic. Any feeling of irritation or dissatisfaction can be a reminder that we are still trying to trust the ego and to trust Awareness instead.

Furthermore, any practice that helps us to realize our true nature as Awareness is a useful practice. A simple practice is to think the mantra "Awareness" as often as we can remember to. This will help to dispel the illusion that we are a separate "I" and to become what we really are.

Exercise: Think the mantra "Awareness" as often as you can remember to. Do you experience transcendence of the individual "I"?

A mantra must be mindfully thought, not mechanically. Being Awareness happens when we remember that we are Awareness. Like other spiritual practices, the practice itself shows that nobody is doing it (see Section 18.4).

Chapter 20. Understanding by direct seeing

20.1. The role of concepts in Advaita

Understanding starts with a concept, such as the concept that the manifestation is purely conceptual, and proceeds to seeing directly that no object is real.

In the meditation for January 4 in *A Net of Jewels* (1996), Ramesh says,

> "The only true understanding is that nothing is, not even he who understands."

In the meditation for June 21, he says,

> "Although it can be seen, the universe is nonetheless purely conceptual and has no actual substance or reality of its own. All phenomena are nonexistent by nature. Other than the primal Absolute subjectivity in which all exists, nothing in fact does exist!"

Objects can never be real because all objects change, and Reality never changes. However, although they are never real, concepts can be true, meaning that they can negate concepts that are untrue. Untrue concepts are those that assert and maintain the reality of objects, such as the world, the individual, and the body, either explicitly or implicitly. A primary purpose of this course is to see the unreality of all objects. In this way, Reality is uncovered and becomes Self-evident.

Advaita teaches that Consciousness (God) is all there is (see Sections 10.1, 11.1, 14.3). However, that is a pointer to Reality, not a description of It.

The unreality of all concepts is powerfully stated in the often-quoted words of Ramana Maharshi:

> “There is neither creation nor destruction,
> Neither destiny nor free will,
> Neither path nor achievement;
> This is the final truth.”

There is a parallel statement in the Buddhist text, *Visuddhimagga XVI* (see http://www.sacred-texts.com/bud/buddha2.htm):

> "Mere suffering exists, no sufferer is found.
> The deeds are, but no doer of the deeds is there.
> Nibbana [Nirvana] is, but not the man that enters it.
> The path is, but no traveller on it is seen,"

and further (see http://www.angelfire.com/indie/anna_jones1/fundamental.html):

> “No doer of the deeds is found,
> No one who ever reaps their fruits;
> Empty phenomena roll on [unfold]:
> This only is the correct view.
>
> And while the deeds and their results
> Roll on and on, conditioned all,
> There is no first beginning found,
> Just as it is with seed and tree. ...
>
> No god, no Brahma, can be called

The maker of this wheel of life:
Empty phenomena roll on,
Dependent on conditions all."

Chapter III, Verse 27 of the Classical Hindu text, the *Bhagavad Gita*, says,

> "Actions are wrought in all cases by the energies of Nature. He whose mind is deluded by egoism thinks 'I am the doer'."

On p. 22 of *The Relationship Between 'I' and 'Me"* (2006), Ramesh paraphrases these as follows:

> "Events happen, deeds get done, consequences happen, but there is no one doing any deed."

We remind the reader that, as we said in Section 14.1, concepts in spiritual teachings are used as pointers to Reality rather than as concepts to be believed. In practical terms, this means that the function of a concept is to facilitate disidentification. This results in a sense of freedom and peace, and in release from suffering. This is its only function. If it fails to do that, the concept is useless at best, and at worst, it strengthens identification. An analogy often used by spiritual teachers to illustrate this point is that a concept is like a finger pointing to the moon (Reality). When one sees the moon (when awakening occurs), the finger is forgotten.

However, a common mistake among spiritual seekers is to regard the concept itself as truth, and thus to cling to it. This is like worshipping the finger rather than looking at what it is pointing to. In doing so, the ego averts a threat to its existence. For example, if a religion regards its concepts as truth, it is worshipping the finger (see Chapter 14). Another mistake is to look at a spiritual concept and to disregard what it is pointing to because of resistance to the concept itself. Again, the ego averts a threat to its existence. Most materialists and many scientists make this mistake when they refuse to question the reality of "objective reality".

Question: Have you ever observed or experienced an example of worshipping the finger rather than the moon?

Different spiritual teachers use different concepts, but always for the same purpose. A seeker is usually drawn to a teacher who uses a conceptual system that is acceptable to him/her in some way. Acceptability usually means that the concepts are consistent with the seeker's intuition and experience. However, as a seeker matures, the concepts used by a teacher may be less and less useful for disidentification. Indeed, they can even begin to generate more suffering than they relieve because they can begin to produce more and more conflicts with the seeker's intuition and experience. In such cases, the seeker scarcely needs to be told to find another teacher. However, this can be easier said than done if the seeker has developed a strong personal relationship with the teacher, or if the seeker is deluded by the teacher into thinking that staying with him or her is the only way to salvation. This kind of delusion is responsible for the many stories of seekers having clung to a teacher long after the teacher's usefulness has faded. Probably the best attitude to take towards spiritual teachers is to use them as resources, without regarding any one of them as one's only avenue to salvation. The

spiritual marketplace is no different from the commercial marketplace in this respect, so, even here, the guiding rule is *caveat emptor*.

Question: Have you ever outgrown a religious or spiritual teacher or have found him/her no longer helpful?

20.2. What is direct seeing?

For a few seekers, merely hearing the right words from the right teacher is enough to catalyze deep understanding and awakening. However, those seekers are rare, and for most people, active inquiry is necessary to see what the words mean. This inquiry can take the form of questioning the teacher, which is what happens in satsang, or it can take the form of inner examination and observation. Inquiry is a scientific investigation into what is true and what is not. It is scientific because it is based on observation, and both the method and the results can be communicated to others who can then verify them for themselves (see Section 1.1). More accurately, only what changes and therefore what is unreal can be observed and communicated, while what is Real does not change and therefore cannot be observed or communicated. Nevertheless, through inquiry It can be known to be true. Inquiry is discussed in detail in Chapter 23.

The practice of inquiry (see Chapter 23) allows us to see directly that there is no "I". Direct seeing is also the technique of Buddhist mindfulness meditation (see Sections 14.6, 24.2). In these practices, we see directly that there is no mind, there is only a mental process; there is no body, there is only a sensory process. (Quantum theory shows this conceptually, see Section 9.1). Direct seeing reveals that what seems to be real is not, so realization of What-Is can arise. Direct seeing is also the main thrust of Wei Wu Wei's books, which tend to point out what is not true rather than vainly attempting to say what is true.

Exercise: Close your eyes. After a few moments of resting quietly, sink inward and downward out of the head and into the body and rest there. Can you sense pure Presence? Can you see that all thoughts, feelings, emotions, and sensations arise from this background of pure Presence?

Now open your eyes. Can you see that all visual objects arise from the background of pure Presence? (This is more difficult than the previous exercise because of our strongly conditioned visual perception.)

Direct seeing shows us that God is everything, and everything is God (see Section 14.3). The mantra practice described in Section 19.1 is a powerful aid in seeing this.

20.3. The use of direct seeing to disidentify from the "I"-doer

On p.7 of *Ask the Awakened* (2002), Wei Wu Wei says,

> "Why are you unhappy? Because 99.9 per cent of everything you think, and of everything you do, is for yourself—and there isn't one."

In the meditation for November 27 in *A Net of Jewels* (1996), Ramesh says,

> "Breathing goes on by itself while the deluded individual thinks it is he who is breathing. Thoughts come from outside, arising spontaneously through intervals of mental vacuum, and he thinks it is he who is thinking. The thoughts get transformed involuntarily into action, and he thinks it is he who is acting. All the while, he is doing nothing but to misconstrue the actions of the Totality as his own action."

In any present moment, we can see that there is no doer (see Section 23.2). Why do we then think we can do something? We think so because of identification at the second level, which is identification with doership (see Section 11.4). Identification with doership is identification with the past and future, because it means that "I" have done something in the past, and that "I" can do something in the future. Thus, "I" feel regret, guilt, or shame, or pride for what "I" have or have not done; and "I" feel worry, anxiety, or fear about what "I" can or should do. Consequently, "I" suffer.

Exercise: Close your eyes. Can you see directly that there is no thinker in the present moment?

20.4. The use of direct seeing to disidentify from "mine"

Identification at the third level (see Section 11.5), the level of "mine", produces suffering from myriad unpleasant emotions. All suffering comes from claiming thoughts, feelings, or emotions as our own. However, direct seeing shows that none of them belong to us (see Chapters 23, 24). They all arise spontaneously and they all fall away spontaneously.

Exercise: Close your eyes. Can you see that all thoughts, feelings, and emotions arise and fall spontaneously?

Direct seeing also shows that we are limitless (see Sections 23.3, 24.3). Thinking that we are limited is suffering (bondage=boundedness) so we will suffer until we see that we are not limited. If we think we are limited, the dream (Section 13.1) is a nightmare. If we know we are not, the dream is only what it is. In the metaphor of Section 13.6, the thorn will hurt until we realize that there is no thorn by investigating it (by probing the thorn with other thorns and seeing what happens).

Eventually, as identification weakens, suffering will fade away. Even initially, there may be a sense of freedom, if only dimly felt. This is an early result of disidentification, and the less the identification, the greater is our peace.

20.5. Because there is no "I"-object, there is no other

In the meditation for May 10 in *A Net of Jewels* (1996), Ramesh says,

> "In one's natural, immediate attention or awareness there are no boundaries, no separate items of manifestation, unless and until thought intrudes and directs specific concentration on a particular thing. And this is what creates separation along with the

whole chain of other thoughts and reactions that lead to every kind of conflict and unhappiness, which we then interpret as bondage. But the realization that boundaries are a product of thought is at once the realization that the separation caused by these boundaries and the conflicts that ensue are all an illusion."

Sensations can be considered to be real (e.g., pain hurts) but all objects are mental images. Thus, I can sense the pressures on my finger tips as I type but the keys and keyboard are only mental images. If I kick a rock, the sensation of pain is real but the rock is only a mental image. The keyboard and the rock do not exist as objects separate from "me". As we saw in Section 11.4, when the "I" is seen as being separate from the not-"I", the not-"I" is seen as separate from the "I". Repeated conceptualization of the not-"I" and belief in its existence then creates the illusion of massive fragmentation and myriad separate objects, with the "I" being separate from each.

As we saw in Section 11.7, we suffer from helplessness and hopelessness when we believe we are victims, and we suffer from hatred and outrage when we believe others are victimizers. To be free from this suffering, it is necessary to see that, not only are we not victims (there is no "I"-object) but also that there are no victimizers (there is no other). "Victims" and "victimizers" morph and change because they are nothing but mental images. This is true because, as we have seen, there is no objective reality (see Chapter 9). This life is nothing but a dream (Section 13.1).

We can see this by seeing the true nature of any object, not just the "I"-object. One way is to follow the reasoning of Section 9.2 and see that separation and naming are purely conceptual operations by experiencing the sensations themselves without conceptualizing them into objects. When the body and the world are looked at in this way, it gradually becomes apparent that, whereas the sensations are real, all objects are nothing but mental images. Their transparency reveals their unreality at the same time that it reveals the reality of the background of pure Presence from which they arise (inquiry also reveals this--see Section 23.5).

Particularly helpful in seeing that all objects are unreal is to realize that, for all of our efforts to get lasting satisfaction, contentment, happiness, or peace from the world, we have found precious little there. The more we have tried to get from the world, the more disappointed we have become because our aversions/attachments have prevented us from seeing the world truly. We will never be satisfied by mere concepts, and the world that we see is nothing but a concept.

Question: Have you ever gotten lasting peace from anything in the world?

Anything that changes cannot be said to be real. The ever-changing world cannot bring us the changelessness that we want. What disappears the instant we close our eyes or turn away can hardly be real. If we think it is, we will suffer. In the metaphor of Section 13.5, the world is nothing but surface froth, devoid of all meaning, significance, or purpose. In the metaphor of Section 13.2, the world is nothing but flat, two-dimensional reflections from a screen. In the metaphor of Section 13.12, whenever we have tried to drink from a mirage, all we have gotten is a mouthful of dry sand. Until we see the true nature of the world, it will be a desert to us.

Exercise: What is it that does not change but is more real than anything that changes? Look and see!

The three-dimensional appearance of the world strongly reinforces the illusion that it and the body exist (see Section 12.1). A one- or two-dimensional world would not seem nearly as real. Yet, three-dimensional illusions that we know to be unreal are very familiar to us. For example, there are three-dimensional slide viewers, three-dimensional movies, and three-dimensional computer-generated virtual realities. Furthermore, when we close our eyes, three-dimensionality disappears (see Section 12.1), the apparent separation between the body and the not-body disappears, and what we then see does not seem nearly as real as what we see with our eyes open. However, Reality is the same whether our eyes are open or closed, whether we are dreaming or awake, and whether we do or do not appear to have a body.

Exercise: Close your eyes and see if the body then has boundaries. What does this tell you about their reality? (Note: We may feel the sensations of touch, pressure, and sound but these are just body sensations. They do not require the concept of boundaries.)

Exercise: Close your eyes and become aware of the Background of pure Presence. Does it have boundaries?
Now open your eyes and see if the Background then has boundaries. What does that tell you about the reality of separate objects?

The unreality of the ego is the ego's best-kept secret. The unreality of the world is the world's best-kept secret. To see the truth of these secrets is to render unnecessary and irrelevant all spiritual teachers and all spiritual teachings.

In the November 20 meditation in *A Net of Jewels* (1996), Ramesh says,

> "The ordinary, ignorant person can only see things as objects seen by a subject. Then, with a certain shift of understanding away from separate personal identity, it dawns on him that only the impersonal subject is real while the objects themselves are illusory. Finally, with total enlightenment, the sage sees objects as objects once again but within an essential unity where there is no separation of subject from object, or in fact any separation of any kind."

While this course is in disagreement with much of *A Course in Miracles* (see Chapter 15), the last three sentences in the introduction to *ACIM* succinctly summarize the message of this chapter:

> "Nothing real can be threatened.
> Nothing unreal exists.
> Herein lies the peace of God."

Disidentification works first at the intellectual level, then finally at the intuitive level (see Chapters 23 and 24). Since Awareness is not conceptual, we must see directly that we are not objects. We are not separate and we cannot be perceived.

By now you will realize that, even though practices have been suggested in this chapter and others will be suggested in later chapters, "we" cannot do these practices because "we" never do anything. Therefore, if they happen, they happen; if not, they don't (see Section 18.4).

Chapter 21. Resistance, clinging, and acceptance

21.1. What are resistance and clinging?

In the meditation for December 20 in *A Net of Jewels* (1996), Ramesh says,

> "It is only resistance that transforms the eternity of the present moment into the transience of passing experience as time or duration. Without resistance there is only eternity."

In the meditation for February 20 in *A Net of Jewels* (1996), Ramesh says,

> "Apart from the futility of effort itself, any attempt to prevent thoughts from arising divides the mind artificially into that which does the prevention against that which is being prevented, creating only neurosis and conflict. Whatever thoughts arise (being without substance) will promptly vanish by themselves if they are not accepted and pursued as effective reality. To try to erase thoughts consciously and deliberately is like trying to wash away blood with blood."

Question: What is it that tries to resist thoughts, feelings, and emotions?

On p. 270 of *I Am That* (1984), Nisargadatta Maharaj says,

> "Suffering is due entirely to clinging or resisting; it is a sign of unwillingness to move on, to flow with life."

In his book and CD, *Breakthrough Pain* (2005), the noted Buddhist meditation teacher Shinzen Young says,

> suffering = pain x resistance.

Thus, pain is not suffering in itself. Suffering also requires resistance to the pain, whether it is physical, mental, or emotional pain.

Resistance is a thought, feeling, or emotion that resists something, be it a thought, feeling, emotion, sensation, perception, or action. Resistance stems from the judgment that what-is should not be the way it is, and from the belief that there is something we should be able to do about it. (Judgment is not the same as evaluation, which does not involve a judgment about what should or should not be.) Resistance is always present whenever victimhood is experienced (see Section 11.7), whether the victimizer is thought to be the self, the body, the mind, others, life, God, or whatever. It powerfully activates the thinking mind (see Section 11.9), and obscures the truth about us (see Section 23.3) by clouding our awareness of it. However, whatever happens---thoughts, feelings, emotions, sensations, actions, and

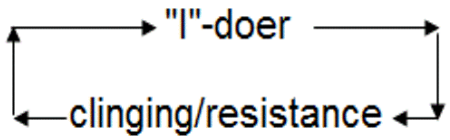
perceptions---must happen. What-is cannot be other than what it is. Therefore, if resistance occurs, it is because it must, and if awakening occurs, that also is because it must.

The dual opposite of resistance is clinging. [In the Second Noble Truth, the Buddha taught that the cause of suffering is craving (Section 14.5).] Like all dual pairs, whenever there is one, there must also be the other. Just as resistance is a thought, feeling, or emotion that resists what is happening and thereby makes it seem real, clinging is a thought, feeling, or emotion that clings to what is happening and makes it seem real (see Section 14.5). But, since change is intrinsic to the manifestation (see Sections 12.1, 12.6), both resistance and clinging ignore its most fundamental characteristic and thus inevitably they create suffering.

The illusion of an "I"-doer results when there is clinging to the sense of separateness (see Sections 7.7, 11.4). Because the "I"-doer seems to be separate from the body-mind (see Sections 5.11, 11.6), it either resists the body-mind's thoughts, feelings, emotions, and sensations, or it clings to them and resists changes in them. This can result in feelings of despair, self-punishment, dissatisfaction, and bondage (Sections 11.8, 16.2). The essence of the "I"-doer, and also the source of all suffering, is clinging to the thought that "I" should have control.

Exercise: Remember a time when you experienced regret or guilt. Did you also have the thought that you should have had more control?

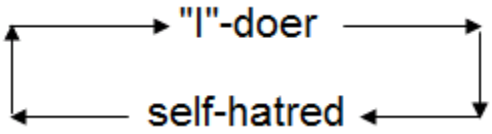
The "I"-doer and clinging/resistance define each other in a self-reinforcing feedback loop as shown below:



Thus, whenever there is clinging/resistance, there is the sense of a doer that is clinging/resisting, and whenever there is the sense of doership, there is also clinging/resistance.

Question: What is the feeling of embarrassment? Is it a form of resistance, a form of clinging, or both?

There are many other kinds of self-reinforcing feedback loops. A common one is the self-hatred loop:



Self-hatred can be as subtle as mild dissatisfaction with "oneself" or as violent as an impulse to suicide. If there is no "I"-doer, there can be no self-hatred because self-hatred requires a doer to hate. If self-hatred persists, it is because there is clinging or resistance to either it or to the "I"-doer. Otherwise it spontaneously disappears.

Whenever pain, poverty, sickness, danger, or ignorance are present, there may also be efforts to try to change, eliminate, or defend against them, but if there is no thinking mind (see Section 11.9), there is no resistance, no clinging, and no suffering. If the thinking mind is present, resistance and clinging are also present, and the same conditions and efforts will entail suffering.

Whenever there is craving and clinging, the Presence that is the Background of all existence (see Section 23.5) is concealed, so we are cut off from the knowledge that everything is in us. If there is no craving and clinging, absence of separation from all objects is our constant experience.

Exercise: Close your eyes and go inward and downward, out of the head and into the body. Sense the boundaryless Presence. Now open your eyes. Can you still sense the Presence? Now, choose any object and focus your attention on it while still maintaining the same sense of Presence. Can you sense that the Presence of the object is the same as your Presence?

Resistance, clinging, and suffering result from ignorance of our true nature. When we are open to the suffering of others (see Sections 16.1, 24.2), we feel their suffering, but we also feel our connectedness. When we resist the suffering of others and close ourselves off from it, we feel lonely and we suffer alone.

Exercise: Open yourself to the suffering of everybody you see. What is your experience? Do you feel more connected to them or not?
Now close yourself off from everybody else's suffering. What is your experience? Is it loneliness and isolation or not?

21.2. Repression of emotions creates physical illness

In the meditation for December 23 in *A Net of Jewels* (1996), Ramesh says,

> "Every attempt at controlling our inherent nature results only in suppression and its adverse consequences. All that one can do is live according to the inherent nature of one's psychosomatic apparatus and let the understanding of our true nature deepen and work such changes as are necessary without any thinking or volition on our part."

Every emotion is expressed as a body sensation as well as a thought (see Tara Brach, *Radical Acceptance: Embracing Your Life With the Heart of a Buddha* (2004)). Because the body is more persistent and less fluid than the mind, the body sensations corresponding to the emotions are more persistent and less fluid than are their mental correlates. Long after an emotion has seemingly disappeared from the mind, it still resides in the body as a congealed memory (see Section 7.10 for a possible mechanism), quickly to be expressed in the mind when a suitable stimulus appears.

Emotions are not rational--if they were, they would not be emotions but would be thoughts, instead. Thus, to try to justify our negative emotions by rationalizing them is not only futile, but it can also lead to destructive attempts to justify our behavior. For example, if we feel guilty for

our racial or sexual prejudices, we think, "they are unworthy", or "they are inferior". If our private rationalizations do not work, we join allies in order to dilute our guilt; hence, the creation of religions, movements, and ideologies to discriminate against others or to make war. However, when negative emotions cannot be accepted, they are resisted instead.

Question: Have you ever felt racial or religious prejudice? Did it make you feel guilty or ashamed? Did you try to suppress it?

Resistance to emotions takes the forms of suppression and repression. Suppression is a conscious process that pushes down an uncomfortable emotion, such as anger, so it is temporarily unseen. Habitual suppression leads to repression, which is an unconscious process that renders the emotion completely unseen. By investigating the emotions as they are expressed in the body, suppressed emotions can be brought back to awareness, but repressed emotions are usually unavailable without some kind of external intervention. Both suppression and repression must lead to suffering because they try to divide Consciousness into parts, the desired and the undesired, or the acceptable and the unacceptable.

Fear, anxiety (fear-based apprehension), anger (frustrated desire), guilt (self-condemnation), and shame (self-punishment/disgust) are among the most potent and imprisoning emotions in our lives (see Sections 11.4, 11.5, 11.6, 11.7, 11.8). Before the age of two (see Section 5.8), we began viewing ourselves as being separate, and we learned that our anger was "bad" when our first spontaneous, angry outbursts were met with stern disapproval and perhaps even with physical punishment. Fear of disapproval, then anxiety, guilt, and shame quickly followed. Fear of these emotions in turn then created the powerful mechanism of repression, which banished them from our awareness. In fact, so effective is the repression mechanism that it even banishes itself from our awareness, and therefore, we never know when we are repressing an emotion.

Parents, culture, religion, and society all approve and reinforce the suppression of emotions--in fact, it is an essential part of our socialization. Socialization enforces conformity by teaching us that we can resist our emotions, but the belief that we can resist them causes us to live in fear of them. Our perceived needs to be "nice", "good", "perfect", "conscientious", or "responsible" are conditioned responses to the fear of our own emotions, but these needs themselves foster even more fear of, and anger at, the responsibilities that are created by them.

Question: Do you think it is possible to raise children so that they feel neither guilt nor shame?

Because repression/expression form an inseparable pair, repressed emotions must always be expressed--and the stronger are the forces for repression, the stronger are the forces for expression. The longer the repression of anger, guilt, and shame continues, the more they become rage and hatred, and the stronger must be the barriers against their expression. After rage/hatred has been internalized for many years, it forms a powerful core of conditioning that we always carry with us, but that we glimpse only when it is revealed by an intense, uncontrollable explosion.

Question: Have you ever had an uncontrollable outburst of anger?

Repression of rage/hatred has devastating consequences to our physical and emotional health and our well-being. John Sarno, MD, after three decades of practicing rehabilitation medicine with thousands of patients, has described in his remarkable book, *The Mindbody Prescription* (1998), how repression leads to many disabling kinds of physical pain and distress (see also his website at www.healingbackpain.com/index2.html).

According to Dr. Sarno, the forces for expression of culturally forbidden rage/hatred (e.g., in the forms of racial or religious hatreds, or of anger toward our parents, siblings, or children), and of emotionally painful shame, are so strong that the brain creates a defense against them by distracting our attention from them. This defense takes the form of intense physical pain and distress. (It is hardly surprising that the mind can create physical illness because we already know that it can create physical healing (see Section 5.2). Furthermore, all "negative" emotions, whether they are repressed or not, have their counterparts in the body and can cause physical illness.)

Among these illnesses are back pain, tension and migraine headaches, and gastrointestinal distress. These are genuinely physical, rather than mental, disorders but they stem from stress in the nervous system.

Question: Which of the disorders in the previous paragraph have you experienced? Do you think they might be psychosomatic?

The defense against expression also creates fear of its own engendered physical pain and distress, which increases them even more, and even creates anger at them, which further compounds them. (Another mode of defense is to divert our anger, guilt, and shame into culturally approved channels like moralistic, ideological, or self-righteous anger and blame. These and other modes are described in Section 11.8.)

According to Dr. Sarno, our understanding of the function of the defense leads us immediately to the antidote for the pain and distress, which is to focus our awareness on the emotions that surround the repressed ones rather than on the pain. This undermines the purpose of the defense, which is to distract us from these emotions. The antidote requires 1) a deep understanding of the purpose of the defense, 2) a realization that the physical pain and distress are a result of physical processes that stem from the repression of emotions, and 3) a persistent focus on the emotions and all of their possible sources, both past and current. The more the emotions are allowed into the awareness, the less will be the need for the pain and illness. They then either vanish or are greatly reduced. This usually requires investigating the body sensations corresponding to the emotions, and accepting them with kindness rather than avoiding them (see Section 16.2). Mindfulness meditation (see Sections 14.6, 24.2) and psychotherapy are valuable vehicles for this investigation.

21.3. Clinging/resistance, desire/fear, attachment/aversion

Clinging/resistance encompass the attachment/aversion dualism, and this in turn is based on the desire/fear dualism. But whenever there is desire, there is fear also--the fear of losing or not getting--so both halves of both dualisms can be thought to be fear-based (see Section 11.6). Fear is always present whenever there appears to be separation, so a fear-based life is the bane of those who think they are separate. Fear stems from the belief that we can, or

should be able to, change what-is so that we can get what we want and avoid what we do not want (see Section 17.5). When the "I"-doer disappears, so will fear, as will all feelings of victimhood and powerlessness (see Sections 20.2, 20.3, 20.4).

A particularly difficult desire/fear dualism to deal with is that associated with survival (see Sections 11.4, 11.5, 11.6, 11.7). Many people feel a consuming stress associated with making a living and ensuring the survival of self and family, yet this stress is no different from any other. All stress depends on the feeling of personal responsibility (see Chapter 15), and this feeling in turn depends on identification with personal doership (see Section 11.4).

In the meditation for September 21 of *A Net of Jewels*, Ramesh says,

> "Spontaneous, natural action happens only when the mind is vacant of the slightest trace of intention or planning. The greatest liberty is in having total trust in that final authority that makes the grass grow and our limbs, organs and minds work by themselves."

In any moment any body-mind may or may not survive, but survival never depends on a personal "I"-doer. Even certain biblical passages, which are usually interpreted dualistically as prescription but which can also be interpreted nondualistically as description (see Section 17.1), make this clear. For example, we find in *Matthew 6*:

> *24: "No one can serve two masters; for either he will hate the one and love the other, or he will be devoted to the one and despise the other. You cannot serve God and mammon.*
> *25: "Therefore I tell you, do not be anxious about your life, what you shall eat or what you shall drink, nor about your body, what you shall put on. Is not life more than food, and the body more than clothing?*
> *26: Look at the birds of the air: they neither sow nor reap nor gather into barns, and yet your heavenly Father feeds them. Are you not of more value than they?*
> *27: And which of you by being anxious can add one cubit to his span of life?*
> *28: And why are you anxious about clothing? Consider the lilies of the field, how they grow; they neither toil nor spin;*
> *29: yet I tell you, even Solomon in all his glory was not arrayed like one of these.*
> *30: But if God so clothes the grass of the field, which today is alive and tomorrow is thrown into the oven, will he not much more clothe you, O men of little faith?*
> *31: Therefore do not be anxious, saying, `What shall we eat?' or `What shall we drink?' or `What shall we wear?'*
> *32: For the Gentiles seek all these things; and your heavenly Father knows that you need them all.*
> *33: But seek first his kingdom and his righteousness, and all these things shall be yours as well.*
> *34: "Therefore do not be anxious about tomorrow, for tomorrow will be anxious for itself. Let the day's own trouble be sufficient for the day*.

Question: Do you feel the stress of responsibility?

Question: Nondualistically, what would it mean to serve God? What would it mean to seek his kingdom and righteousness?

Without identification, there can be concepts (see Sections 9.2 and 11.1) but there can be no objects (see Section 11.4). This can be seen through inquiry (see Chapter 23) and meditation (see Chapter 24). With identification, objects seem to arise, along with the attachment/aversion (clinging/resistance) dualism. We might think that we are attached to a person, object, or condition but we are actually attached to the feeling or emotion that the person, object, or condition engenders. For example, if we love somebody, what we are really attached to is the feeling itself. Without the feeling, there would be no attachment to the object.

Attachment is persistent clinging to a thought, feeling, emotion, or image. Aversion is persistent resistance to its opposite. Actually, fear and desire are present in both, as is shown in the table below. A grievous but common misunderstanding is that fear/desire are necessary for efficient functioning, but in fact, they are an enormous obstacle to it, and, when identification with them disappears, they themselves tend to disappear. [After awakening occurs, fear/desire can continue for some time because of conditioning but they cause no suffering because there is no identification with them (the fan continues to turn even after the electricity has been turned off, see the metaphor of Section 13.7.)]

The following table lists some familiar examples of attachment and aversion. Note that, except in the first six cases, the aversion listed is the polar opposite of the attachment listed. In the first six cases, the primary aversion is the aversion to emptiness, i.e. to the loss of the self (see Section 14.5). This aversion is a result of the failure to realize that emptiness is fullness (see Chapter 22).

Attachment: desire for the presence of: / fear of the absence of:	Aversion: fear of the presence of: / desire for the absence of:
"I"	emptiness
thinking	emptiness
feeling	emptiness
sensing	emptiness
purpose	emptiness
excitement	emptiness
clinging	resistance
love	hate
hate	love
"righteous" anger	weakness
"acceptable" anger	"unacceptable" anger
power	helplessness
belief	nonbelief
youthfulness	aging
pleasure	pain
desire	fear
fear	desire
comfort	discomfort
convenience	inconvenience
sweetness	bitterness
success	failure
relationships	loneliness
self-esteem	self-condemnation
health	sickness
wealth	poverty
life	death
death	life
existence	nonexistence
status	obscurity
approval	disapproval
excitement	boredom
happiness	sadness
positivity	negativity
beauty	ugliness
freedom	bondage
good	evil
virtue	sin
right	wrong
pride	guilt
pride	shame
humility	arrogance
hope	despair

Question: Do you fear the loss of the self?

Any thought, feeling, or emotion may be present at any time, but, if there is no attachment to it, there is no suffering.

Whenever one desire is satisfied, another always replaces it. The mind jumps from one desire to another like a monkey jumping from one branch to another (this is called "monkey mind"). Thus, one suffering is always replaced by another, so suffering can never be ended by trying to satisfy desire.

Everyday life as we know it could not exist without fear/desire. Even entertainment depends on it, from the ancient Greek comedy-tragedies to today's love-hate-terror dramas. To the fearful, the thought of life without fear/desire might itself seem fearful. However, fear of the absence of fear/desire is based on the concept that we are determined by our fears and desires. But we are not determined by them because, as we have already seen, we transcend all fears and desires (see Section 9.3).

Question: Are you attracted to violence in television and the movies?

A seemingly unlikely, but actually common, form of attachment/aversion is aversion to life/attachment to death (listed in the above table, see also Section 17.4). Identification with this dual pair can result in chronic mental depression (what used to be called melancholia). Before such a depressed person can be cured, he/she must clearly see his/her aversion to life/attachment to death. Clear seeing may not remove the attachment/aversion, but it will reduce identification with it.

In the meditation for September 22 in *A Net of Jewels* (1996), Ramesh says,

> "Feelings and emotions are all based on duality. So long as they continue to dominate one's outlook, duality will continue to have a firm hold, excluding the real holiness, the wholeness that is UNICITY."

However, this does not mean to suppress our feelings and emotions, because suppression is resistance. Rather, it means to become aware of them and to accept them so that we are no longer estranged from them (see Sections 16.2, 24.2).

21.4. What is Acceptance?

In duality, acceptance/resistance form a polar pair. However, Acceptance as we shall speak of it transcends all duality. Therefore, we cannot practice Acceptance because the dualistic "I"-doer is present in all practices. However, we can see directly that our true nature is Awareness. Awareness accepts everything and rejects nothing. Therefore, Acceptance results from seeing directly that Awareness is our true nature and understanding that it is our true nature.

21.5. When resistance ends, life becomes stress-free

To live without resistance is to live without stress. In the meditation for June 27 in *A Net of Jewels* (1996), Ramesh says,

> "To live naturally is to live as a mere witness, without control and therefore without mentation, want or volition, uninvolved in the dream-play of life and living."

In the meditation for November 23, he says,

> "As acceptance gradually expands, then life becomes easier. Suffering becomes more easily bearable than when you are looking at it as something to be rejected, something to be ended."

On page 76 of *"The Wisdom of Sri Nisargadatta Maharaj"* (1992) by Robert Powell, Nisargadatta Maharaj says,

> "The moment you know your real being, you are afraid of nothing. Death gives freedom and power. To be free in the world, you must die to [disidentify from] the world. Then the universe is your own, it becomes your body, an expression, and a tool. The happiness of being absolutely free is beyond description. On the other hand, he who is afraid of freedom cannot die."

And on page 426 of *I Am That* (1984), he says,

> "Once you realize that the road is the goal and that you are always on the road, not to reach a goal, but to enjoy its beauty and wisdom, life ceases to be a task and becomes natural and simple, in itself an ecstasy."

We might think that it is impossible not to resist suffering, but resistance to suffering creates even more suffering. If we shift our perspective from seeing suffering as a curse to seeing it as a necessary part of life, resistance to suffering tends to disappear and, with it, the suffering also (see Section 17.2).

Instead of the word Acceptance, Francis Lucille uses the word Welcoming, which he defines as "benevolent indifference". Both words, Acceptance and Welcoming, imply more than pure indifference (see also Section 17.7). They also imply the transcendental Love of the Self for the Self as discussed in Section 16.1. (For more about Love, see Chapter 25.)

Chapter 22. Disidentification from attachment and aversion

In the meditation for January 27 in *A Net of Jewels* (1996), Ramesh says,

> "You can't fight the ego. Accept the ego, and let it go on. This understanding will gradually push the ego back."

In the meditation for February 24, he says,

> "Fighting the ego, the mind, is precisely what the ego wants. You cannot fight the mind. You cannot suppress the ego. Fighting, resisting, controlling it is an impossible action. What is really needed is a negative or feminine action. That is to yield, to allow things to be as they are."

In the meditation for March 6, he says,

> "Thoughts just witnessed get cut off for the simple reason that there is no comparing, no judging, no decision making."

On p. 125 of I Am That (1984), Nisargadatta says,

> "Be conscious of yourself, watch your mind, give it your full attention. Don't look for quick results; there may be none within your noticing. Unknown to you, your psyche will undergo a change; there will be more clarity in your thinking, charity in your feeling, purity in your behavior. You need not aim at these — you will witness the change all the same. For, what you are now is the result of inattention and what you become will be the fruit of attention."

Nonduality is the teaching that separation is an illusion (see Sections 10.1, 14.3) and that our true nature is pure Awareness (Section 9.3). Suffering is a reminder for us to see this. Whenever we suffer for any reason, it is because we are identifying as a separate self rather than realizing our true nature. Whenever we think we are separate, it is because there is attachment or aversion to a thought, feeling, emotion, sensation, or self-image. This is the "mine" property of the ego (see Section 11.5). Thus, it is attachment/aversion that is the problem, not the thought, feeling, emotion, or sensation itself.

Attachment and aversion to suffering are such a basic part of our personality that keeping them seems safer than losing them. For example, attachment/aversion to stoicism, sadness, fear, anger, or hatred may make us feel alive, but we pay dearly for them in suffering and unhappiness. Until we realize that emptiness is fullness, losing our suffering can seem to be too great a price to pay for peace and contentment.

Question: If losing your attachment/aversion to anger and resentment means acceptance of yourself, are you ready to let them go? If it even means acceptance of those you dislike or have an aversion to, are you still ready to let them go?
Question: Do you see any fallacy in the common Christian teaching entreaty to "Love the person but hate the sinner".

In Buddhism, much importance is placed on the practice of mindfulness, which is one of the eight practices in the Noble Eightfold Path (see Section 14.5). Mindfulness, or conscious attention, allows us to become aware of our attachments and aversions, thereby allowing disidentification to occur spontaneously. Closely related to mindfulness is compassion for ourselves, which is to be aware of our own suffering and to yearn for it to end (see Section 16.2).

On p. 49 of *Elements of Buddhism* (1990), John Snelling says,

> "In order to live skillfully, in harmony with the dynamic Universe, it is essential to accept the reality of change and impermanence. The wise person therefore travels lightly, with a minimum of clutter, maintaining the proverbial "open mind" in all situations, for he or she knows that tomorrow's reality will not be the same as today's. He or she will also have learned the divine art of letting go--which means not being attached to people and possessions and situations, but rather, when the time for parting comes, allowing that to happen graciously."

However, in the meditation for July 3 in *A Net of Jewels* (1996), Ramesh warns us that,

> "Wanting to let go and the letting go are two different things. The letting go will happen only when you're not wanting to let go."

The first step in mindfulness practice is to become clearly aware of our thoughts, feelings, and body sensations. First, we ask, What am I feeling in my body?, and then look for the body sensations. We focus on them and feel them as clearly as possible from the inside. They may be anywhere in the body, but are most often in the abdomen, solar plexus, chest, face, forehead, or eyes. For example, we may feel anger as tightness in the solar plexus or chest, with flushing in the face, eyes, or forehead. We may feel anxiety as tightness in the abdomen, solar plexus, or chest. We may feel sadness as heaviness in the chest with tears welling up in the eyes. At first, it may be difficult to distinguish and identify the different sensations, but it will become easier with practice.

Now we look for the memories and imaginations behind these sensations. These might be memories and imaginations of sadness, grief, fear, loss, hurt, rejection, loneliness, abandonment, desolation, or of any other experiences of suffering. In addition, there are probably beliefs that are hidden from our conscious minds but that form the foundation of much of our suffering. Because we are not usually conscious of hidden beliefs, it is helpful, even necessary, to have a therapist or counselor assist us in this process.

Hidden beliefs are usually felt as body sensations which arise in reaction to a stimulus (see Section 5.15). Usually they are felt rather than cognized. Therefore, if we are to become aware of these beliefs, mindfulness of body sensations is essential. Hidden or not, all of our beliefs form part of our conditioning.

Some examples of hidden beliefs that can generate enormous suffering are, "I don't deserve to be loved", "I" don't deserve to be successful", "I don't deserve to have good things happen to me", "I don't deserve to exist". We might think that we could not be attached to such "absurd" beliefs (see Section 16.2), but if the belief is hidden, so is the attachment to it. Yet, if we are to become disidentified from them, they must become conscious.

Whenever there is suffering, there is attachment/aversion, which is identification (see Chapter 21). Thus, the presence of suffering can be the first sign of it. For example, whenever we suffer from sadness, we notice the body sensations of sadness, and we see whether sadness is part of our identity, e.g., "Am I a sad person?". Then we become aware of the hidden beliefs behind the sadness, e.g., "I don't deserve to be loved".

Now, we ask, "What am I clinging to or resisting?", then we look. When we see our attachments/aversions clearly, they weaken and our suffering spontaneously decreases. We may need to see our attachments/aversions clearly many times before true disidentification occurs. Seeing them clearly is not the same thing as giving them up. Giving them up is an attempt by the ego to solve a problem by pretending to let go of it while still clinging to it. However, true letting go cannot be done by the ego, and when it happens, it leaves no suffering behind.
More examples of attachment/aversion and disidentification from them are as follows: Whenever we suffer from anguish at being "wrong", we notice the body sensations of anguish and we see whether we are attached to being "right" because we have a fear of being "wrong". Whenever we suffer from pride or arrogance, we notice the body sensations of self-

righteousness and see whether we have a fear of being "guilty" or "worthless". Whenever we suffer from a judging thought, we notice the felt sense of it, and see whether we are clinging to it because of our own fear of being judged. Whenever we suffer from anger, we notice our clinging to it and see whether we have a hidden belief that we are weak. Whenever we suffer from hatred, we notice our attachment to it, and see whether it stems from a hidden belief that we are inferior. Whenever we suffer from guilt, we see whether we have an attachment to it, or whether it comes from a hidden attachment to doing the "wrong" thing. The same practice works for any kind of suffering, including attachment/aversion to craving, lust, fear, anxiety, envy, jealousy, regret, or self-condemnation.

Whenever we find attachment or aversion, we bring clarity to it by naming it. For example, when we notice sadness, we look for an attachment/aversion to it and name it: "That's attachment/aversion to sadness".

Exercises: Can you focus on your attachment/aversion to sadness rather than on the sadness itself? Can you focus on your attachment/aversion to judging rather than on the judging itself? Can you focus on your attachment/aversion to anger rather than on the anger itself? Can you focus on your attachment/aversion to hatred rather than on the hatred itself? What happens to your attachments/aversions when you just notice them and name them?

We can cultivate forgiveness through a practice of loving-kindness (see Section 24.2). But, if the practice merely covers up our unforgiveness, we are still not free. Nondualistically, forgiveness is the absence of attachment to resentment or anger rather than being something we do. Therefore, a nondualistic forgiveness practice is to simply become aware of our attachment to unforgiveness. The most important one to forgive is oneself because it is impossible to forgive another without forgiving oneself.

Exercises: Whenever you are feeling regret, guilt, or shame, where in the body do you feel them? Notice whether attachment/aversion to them are also present. If they are, where is the felt sense of them? What happens to attachment/aversion if you just notice it and name it?

Exercises: Think of somebody for whom you feel anger, resentment, or aversion. Now look for an attachment to these feelings and the felt sense of the attachment. What happens to the attachment and its felt sense if you just notice it and name it?

Gratitude is similar to forgiveness because both are dualistically opposite to resentment or indifference. We can cultivate gratitude through a practice of loving kindness (see Section 24.2). However, just as nondualistic forgiveness is the absence of attachment to unforgiveness, nondualistic gratitude is the absence of attachment to ingratitude. Therefore, a nondualistic gratitude practice is to notice our attachment to ingratitude and to name it.

Exercise: Think of a situation in which you feel resentment. It need not be directed towards a specific person or persons--it could be towards the world, or life itself. Where in the body do you feel it? Now look for an attachment to it and the felt sense of the attachment. What happens to the attachment and its felt sense if you just notice it and name it?

Similarly, we may think of trust as a belief that things will somehow work out in our favor. Desire and acting on a desire are natural and cannot be avoided (see Section 21.3) but attachment to an outcome causes suffering because outcomes are unpredictable. We can trust only what does not change and the only thing that does not change is Awareness. Therefore, nondualistic trust, which is trust in Awareness, causes no suffering. We may desire something and act on that desire, but there will be no attachment to an outcome if trust in Awareness is present. We reinforce our experience of trust in Awareness whenever we notice an attachment to an outcome and see that if we trust Awareness, there is no suffering.

Question: Do you always trust your speech and actions to be appropriate to the present moment? If you don't, does attachment to an outcome cause you to hesitate or equivocate? What is your experience if you just trust Awareness?

We can never trust anything that changes because it is all unpredictable and unreliable. We can trust only what does not change, and the only thing that does not change is pure Awareness.

Exercise: See for yourself that you cannot trust anything in the world because it all changes. Now see for yourself that you can always trust Awareness because it never changes. What is your experience now?

A self-image consists of a pair of dual opposites, the image of what we want to be plus the image of what we don't want to be. Attachment/aversion to a self-image always leads to suffering because it limits the awareness of our true nature.

Exercise: What self-image are you attached to, and which one do you resist? (For example, if there is attachment to an image of being right, there is always aversion to an image of being wrong.) Notice and name the attachment/aversion and see if your suffering is affected.

As long as there is identification as an individual, there will be attachment/aversion to a self-image (see Chapter 21). On the other hand, when we see that we are pure Awareness, we are not identifying with any kind of image because pure Awareness is not an image. Clearly seeing that we are pure Awareness rather than any object or image is a definition of enlightenment.

Chapter 23. Disidentification through inquiry

23.1. What is inquiry?

In the meditation for February 25 in *A Net of Jewels* (1996), Ramesh says,

> "Self-inquiry is the direct path to Self-realization or enlightenment. The only way to make the mind cease its outward activities is to turn it inward. By steady and continuous investigation into the nature of the mind, the mind itself gets transformed into That to which it owes its own existence."

On p. 5 of *I Am That* (1984), Nisargadatta Maharaj says,

> "The only difference between us is that I am aware of my natural state, while you are bemused. Just like gold made into ornaments has no advantage over gold dust, except when the mind makes it so, so are we one in being -- we differ only in appearance. We discover it by being earnest, by searching, enquiring, questioning daily and hourly, by giving one's life to this discovery."

And on p. 98-99, he says,

> "As long as you do not see that it is mere habit, built on memory, prompted by desire, you will think yourself to be a person -- living, feeling, thinking, active, passive, pleased or pained. Question yourself, ask yourself. 'Is it so?' 'Who am I'? 'What is behind and beyond all this?' And soon you will see your mistake. And it is in the very nature of a mistake to cease to be, when seen."

As with all practices, it is necessary to describe this practice as though we are individuals who are practicing it. By now, this mode of description should not confuse you. Whether or not any practice happens is not up to us. There is never a doer in any practice, just as there is never a doer in any other action.

Since awakening can only happen from outside of time, no practice, which is always in time, can bring it about. However, practices help to quiet the thinking mind and to point it to what is beyond the mind. Associated with this process is a diminished sense of separation and suffering, including the emotions of anxiety, fear, guilt, envy, hatred, and judgment.

Inquiry, as described by Ramana Maharshi [see *Talks With Sri Ramana Maharshi* (1955), a free download at http://sriramanamaharshi.org/booksfordownlaod.html] and by Nisargadatta Maharaj [see I Am That (1984), a free download at http://www.celextel.org/home.html] is the direct approach in the sense that it directly questions the illusory "me" and reveals the pure Presence of our true nature. It is the only practice that does not reinforce the sense of personal doership (as we have seen in Chapter 20, inquiry is implicit in understanding). Initially inquiry is seemingly practiced by the "me", but the practice itself shows us that there is no "me". It shifts the identity away from the mind and its concepts, which by their very nature are contracting and limiting, towards the expansiveness and limitlessness of pure Presence. It is a valuable sitting meditation technique as well as an eyes-open technique used in activity.

Inquiry is an investigation into the distinction between the self and the Self, i.e., between what changes and what does not change. It is not mysterious or mystical and can be practiced by anybody. It is a process of becoming aware of pure Presence and directing the attention towards its Source, which is pure Awareness. This produces disidentification from all thoughts, feelings, emotions, sensations, perceptions, and actions. This does not mean that they end, only that there is no longer the fiction of an entity that thinks, feels, perceives, acts, and suffers.

We first describe inquiry as an explicit technique. Later we shall broaden it so that it is less ritualistic, and becomes simply an increasing awareness of our misidentifications and of our true nature in all life situations.

23.2. Inquiry into the self: self-inquiry

In Samuel Bercholz's book, *Entering the Stream* (1993), the 2nd Dalai Lama (1475 – 1541) [the current Dalai Lama is the 14th]) says,

> "Sometimes, the thought of "I" suddenly arises with great force....The situation is like that of a rock or a tree seen protruding up from the peak of a hill on the horizon: From afar it may be mistaken for a human being. Yet the existence of a human in that rock or tree is only an illusion. On deeper investigation, no human being can be found in any of the individual pieces of the protruding entity, nor in its collection of parts, nor in any other aspect of it. Nothing in the protrusion can be said to be a valid basis for the name 'human being.'
>
> "Likewise, the solid "I" which seems to exist somewhere within the body and mind is merely an imputation. The body and mind are no more represented by the sense of 'I' than is the protruding rock represented by the word "human." This 'I' cannot be located anywhere within any individual piece of the body and mind, nor is it found within the body and mind as a collection, nor is there a place outside of these that could be considered to be a substantial basis of the object referred to by the name 'I'."

Exercise: Examine where "you" seem to be located. Do "you" seem to be located in the head, in the heart, somewhere else, or nowhere at all? Do "you" seem to be located in different places at different times? Do "you" sometimes seem to be located in somebody else's body, in a pet's body, or in a plant? If "you" seem to be located in a specific place, do "you" have a sense of separation from everything else? If "you" seem to be located nowhere or everywhere, do "you" still have a sense of separation?

In the meditation for January 29 of *A Net of Jewels* (1996), Ramesh says,

> "The personal self or "me" imagines itself to be limited and confined to a particular body. Self-enquiry seeks the source of this spurious "me" by focusing on it the spotlight of attention or awareness, whereupon the "me" vanishes because it does not have any independent existence. It is revealed as being merely an illusion. What remains is that same universal Consciousness that was always already there as the true nature or very BEING of the artificial "me."

On p. 2 of *I Am That* (1984), Nisargadatta Maharaj says,

> "It is enough to know what you are not. You need not know what you are. For as long as knowledge means description in terms of what is already known, perceptual, or conceptual, there can be no such thing as self-knowledge, for what you are cannot be described, except as total negation. All you can say is: 'I am not this, I am not that'. You cannot meaningfully say 'this is what I am'. It just makes no sense. What you can point out as 'this' or 'that' cannot be yourself. Surely, you can not be 'something' else. You are nothing perceivable, or imaginable. Yet, without you there can be neither perception nor imagination. You observe the heart feeling, the mind thinking, the body acting; the very act of perceiving shows that you are not what you perceive."

The practice of inquiry can lead to a temporary state of detachment that can be quite disconcerting. The ego thinks this is a problem but, like all ego problems, it eventually passes. In the August 2006 issue of the *Advaita Fellowship Newsletter*, Wayne Liquorman (one of Ramesh's enlightened students) says,

> "One of the most discouraging and unpleasant phases in the evolution of this Understanding is the point at which you find yourself feeling remote and disconnected from all that is happening around you. It as if the world has gone completely grey -- nothing is important, nothing hurts particularly badly but nothing feels particularly joyous either. You're not really depressed but you're not really happy -- everything has a sameness about it.
>
> "Such a condition often coincides with the initial recognition that you are not truly the author of your thoughts, feelings or actions. It is as if the ego, having been exposed for what it ISN'T shifts its involvement into a new gear. No longer able to claim to be the author it now poutingly claims that there is nothing worth authoring. Yes, it is another lie but it is a persuasive one. As with the previous lie, the lie of personal authorship, a possible solution is to fix it in the bright light of inquiry. Is it true? Is the appearance the reality?
>
> "Eventually the clouds disperse and the greyness goes with it. The landscape of life is once again illuminated in all its beauty and all its ugliness...all its joys and all its sorrows...what is seen is what has always been there...an infinite, fantastic diversity."

The first step in self-inquiry is to become aware of feelings that are uncomfortable. Examples are desire, lust, envy, anxiety, fear, shame, guilt, contempt, resentment, anger, rage, hatred, helplessness, hopelessness, defectiveness, and despair (see Section 11.8, Chapter 22).

Since suffering is always a result of believing that a feeling/thought belongs to "me" (see Section 14.5, Chapters 21, 22), not the feeling or thought itself, the next step is to see who it is that the feelings/thoughts belong to. This is appropriately called self-inquiry (uncapitalized) because it questions the existence of a separate self that can have feelings/thoughts.

Thus, whenever you are suffering, ask a question like,

> Who do these thoughts belong to?
> Who do these feelings of depression, helplessness, anxiety, anger/rage/hatred, regret/guilt/shame, envy, despair, etc. belong to?
> Who is this "I"?

then look for the "I", image, feeling, or thought with which you are identifying. The more specific the question is, the more effective it will be. Don't conceptualize an answer! As soon as you begin looking, disidentification from attachment to the pattern of thoughts and emotions will begin, and you will start to feel relief. On looking, you may see nothing, in which case the suffering is clearly groundless. But you may also see an image of a fearful (or guilty, ashamed, angry, helpless, etc.) victim, or you may just sense a vague, undefined object; but this image cannot be You since You are what is aware of it. You may recognize it as some kind of parent or child figure from your past, but most likely it will be highly distorted. As soon as you see what you are identifying with, suffering will diminish even though the emotion itself may not.

You can even apply this practice to instances when you are feeling no particular emotion, but when your intuition tells you the ego is at work. For example, the ego may ask the question, "Who was "I" in "my" last life?" or, "What will happen to "me" when "I" die?" Both questions are loaded with the assumption that there really is an "I". You may then ask the counter-question, "Who is it that is asking this?" and then look for who it is that is asking. It will be clear that the "I" does not exist when you are unable to find it.

Exercise: Close your eyes and see if you can find the "I". Remember that if you can see or sense it, it cannot be you.

Since the sense of doership or thinkership is essential to the belief in the “me”, a particularly useful form of self-inquiry is to ask, and then to look for the doer or thinker. Do not try to force, direct, or conceptualize an answer. That will defeat the purpose of the exercise. Just look for an image, entity, or sensation. You may find a localized sensation somewhere in the head or chest regions. However, as always, anything that you can see, no matter how subtle or close to you, cannot be you because you are what is seeing it. You may also find nothing at all. In that case, it is even more obvious that there is no thinker or doer.

Exercise: Sit upright and close your eyes. After a few minutes of resting quietly, sink inward and downward out of the head and into the body and feel the breath. After a few more minutes, become aware of your thoughts while still feeling the breath. Where are your thoughts coming from? If you think you are thinking them, try to find the thinker. If you cannot find the thinker, what can you conclude about it?
Now become aware of your feelings. Where are they coming from? If you think they are coming from you, try to find the feeler. If you cannot find it, what can you conclude about it?

A more subtle sense of doership is observership. Even if you cannot find a locus of doership anywhere in the body, there can still be identification with the sense of an "I" that is observing. Whenever you have the sense that "you" are the observer, total disidentification has not yet occurred.

Another approach to inquiry is to investigate the true nature of a thought, feeling, or emotion and where it comes from. For example, if guilt, shame, anger, or hatred arises, ask, "What is this, really?", and, "Where is this coming from?" Don't conceptualize an answer! If it is seen that such emotions simply arise spontaneously from the background of pure Presence and do not come from some object that you call "I", then disidentification will occur and they will no longer bother you, although they may still be present. These examples all illustrate the principle that the way to see what we are is to see what we are not.

Ramesh advocates a form of inquiry when he asks the seeker to verify whether or not free will exists by watching to see whether decisions are spontaneous or not. "Nonvolitional" thoughts are easily seen to come from nowhere, but there may be a strong sense that "volitional" thoughts come from "me". However, inquiry into this "me" will reveal either a location in the body or its nonexistence. In the former case, since you can perceive its location, it cannot be you. In the latter case, the thought clearly comes from nowhere.

Furthermore, by careful watching, we can see that all thoughts, feelings, emotions, sensations, perceptions, and actions appear out of nowhere and disappear into nowhere. Thus, we cannot be the author of any of them.
In all applications of inquiry, the purpose in asking the question is simply to focus the attention. This in itself is not inquiry, however. Inquiry consists in looking for the object questioned without conceptualizing an answer. It is the looking and either finding or not finding that is important. In both cases we have become disidentified from what we are looking for.

We can practice self-inquiry (lower case) simply by being aware of all of our thoughts, feelings, emotions, and sensations. In doing so, we see that all objects are nothing but mental objects, and that, merely by becoming aware of them, we spontaneously begin to disidentify from them. This is the essence of mindfulness meditation, which is discussed in Sections 14.6, 24.2.

Mindfulness in sitting meditation is a challenge because of our tendency to become lost in thoughts of the past or future, but every time we return to Awareness it is a true awakening. Mindfulness in activity is even more of a challenge because of our conditioning as the "I" who suffers. However, in either sitting meditation or in activity, mindfulness is greatly aided by noting and naming our attachments and returning to Awareness (see Chapter 22).

On p. 247 of "*I Am That*" (1984), Nisargadatta Maharaj says,

> "If you are angry or in pain, separate yourself from the anger and pain and watch them. Externalization is the first step to liberation. Step away and look. The physical events will go on happening, but by themselves they have no importance. It is the mind alone that matters."

23.3. Inquiry into the Self: Self-inquiry

To St. Francis of Assisi (1182-1226, founder of the Franciscan Order of the Roman Catholic Church) is attributed the remark (footnote in *Posthumous Pieces* (1968), p. 139),

> "What you are looking for is what is looking."

This is also a succinct statement of the intent of Self-inquiry (capitalized), which means to look for what is looking, or to be aware of what is aware.

On p. 48 of *I Am That* (1984), Nisargadatta says,

> "Just keep in mind the feeling 'I am', merge in it, till your mind and feeling become one. By repeated attempts you will stumble on the right balance of attention and affection and your mind will be firmly established in the thought-feeling 'I am'. Whatever you think, say, or do, this sense of immutable and affectionate being remains as the ever-present background of the mind."

And on p. 220, he says,

> “To be aware is to be awake. Unaware means asleep. You are aware anyhow, you need not try to be. What you need is to be aware of being aware. Be aware deliberately and consciously, broaden and deepen the field of awareness. You are always conscious of the mind, but you are not aware of yourself as being conscious.”

In the meditation for October 4 of *A Net of Jewels* (1996), Ramesh says,

> "How can you find true happiness? For happiness, no positive action is necessary or even possible. Turn yourself inward as the pure, impersonal witness, and you will rest in you true BEINGNESS in utter peace and tranquility. Happiness will become irrelevant."

In the meditation for April 5, he says,

> "Stand in your original state of wholeness, the state before you were born when there was no knowledge "I am" and therefore no need or want of any kind. All suffering will end as soon as you stand in pure Awareness."

In the March 2008 Advaita Fellowship Newsletter, Wayne Liquorman says,

> "This Living Teaching is right here, right now. It is, in fact, as close to you as your breath. When you look deeply into yourself you may be able to see that there is, in this moment, a quality of aliveness that is animating you that is not philosophical and is not abstract. It's there! It is coursing the blood through your veins, it is animating your breath, it is what makes it possible for you to think and speak and see and hear.
>
> This is something that is essential and fundamental and true. It's independent of what you think about it, what you believe about it and what you feel about it. It is here, and with Grace you dissolve into it. You recognise your true self in it. It is this living force, this animating force that has manifested into the complexity we call Life. It is this living force that has manifested into this being which you call yourself."

We will never be satisfied with anything in the world because everything in it changes. The only thing that will ever really satisfy us is our true Self, which transcends all changes.

Whenever we are suffering, we focus the attention on what is looking by asking a question something like,

> What is it that is aware?
> What is it that never changes?
> What is it that cannot be affected?

and then we look. <u>We don't conceptualize an answer!</u> By looking, we will become disidentified from any kind of thought or image that we see. If we have the sensation that what is observing is located in the head or chest, remember again that anything that we are aware of cannot be what is aware. This applies to any sense of localization, even to the observer itself. We may now realize that Awareness is what we really are. As Awareness, we are not in a body, the body appears in us. In fact, all objects appear in us.

We stay in this state until involvement with thoughts recurs, then we repeat the question and look again. This state is one of lightness and transcendence in which we are disidentified from everything in manifestation.

Exercise: Whenever you are suffering, ask, What is it that is aware? What is it that never

changes? What is it that cannot be affected? See if you can find what it is that is aware. What do you find? If you cannot find it, what does that imply about it? Is your suffering affected? If so, how?

Exercise: With your eyes closed, see if you can find an observer that is observing. If you cannot find one, what does that imply about the observer?

Exercise: If there seems to be an observer observing, there must be an awareness that is aware of the observer. Now, ask, What is it that is aware of this observer? and then look.

Exercise: In order to investigate Awareness, ask the following question: What is it that is aware of Awareness? Then look and see what the question is pointing to. If you see any kind of form, object, or location, even the most subtle one, ask, What is it that is aware of this (form, object, or location)? and then refocus your attention. For example, you might visualize Awareness as being located in the head. If so, ask, What is it that is aware that Awareness is located in the head, and again look and see. Since any form, object, or location whatsoever is not Awareness because Awareness is what is aware of it, you will not be able to describe Awareness. However, by doing this exercise, you will be able to recognize that Awareness is what you truly are.

With practice, we find that we can rest in Awareness for longer and longer periods before asking again. Eventually, we are able to omit asking, and to simply rest in Awareness. And finally, we may realize that Awareness is always what we are, and is always what we have been.

Every incident of suffering is another cue to disidentify. Whatever happens or does not happen is never up to us, so the only thing that we can "do" in any situation is to disidentify from it. This will bring an immediate but profound sense of silence and peace which will be irresistible inspiration for continued disidentification.

When we are identified with the thinking mind, there is emptiness, frustration, dissatisfaction, anxiety, and boredom. Our security cannot be found in what is ever-changing. It can only be found in what is never-changing.

What we are looking for is what is looking. We are the home of peace and fulfillment and everything We really want. When we rest in Awareness, We see directly that there is no doer. We are not a concept or object because We are What is aware of them. The activities of the body-mind and of the rest of the world continue but they do not affect Us. The more time We spend resting in Awareness, the more peace We feel. If we were suffering before, we might even forget why we were.

Do not be deceived by the apparent simplicity of this practice! It is far more powerful than the mind can ever imagine because it brings us to the real I, which transcends the mind and therefore cannot be understood by the mind.
In the meditation for February 19 in *A Net of Jewels* (1996), Ramesh says,

> "When conceptualizing ceases, the outward false-seeing stops, and what remains is in-seeing, not seeing inside but seeing from [without] as the source of all seeing."

Every instant of disidentification helps us to reinforce the apperception (nondual awareness) that we are not the doer. Of course, whenever an activity requires intense concentration in order to be efficiently done, we become identified, not as the doer, but as the activity itself, so there is no suffering, i.e., the thinking mind is absent and only the working mind is present (see Section 11.9).
Initially, inquiry is most easily practiced in sitting meditation with a minimum of distractions (see Section 24.3). However, its real value is realized only when we remain disidentified in all forms of activity. Ultimately, Self-inquiry is transformed from an active practice into the realization that ever-present, pure Witnessing is what we are. In the meditation for December 16 in *A Net of Jewels* (1996), Ramesh says,

> "Self-inquiry is a passive rather than an active process. Mind is allowed to subside into its source even while engaged in normal activity, which then becomes an undercurrent of witnessing that gradually extends throughout all waking hours and begins to pervade all one's activities without intruding on them or interfering with them."

Nisargadatta Maharaj was a striking example of successful inquiry. In an article in the October 1978 issue of *The Mountain Path*, Jean Dunn, a disciple of his, wrote that he once said,

> "When I met my guru he told me, 'You are not what you take yourself to be. Find out what you are. Watch the sense "I Am", find your real Self.' I did as he told me. All my spare time I would spend looking at myself in silence. And what a difference it made, and how soon! It took me only three years to realize my true nature."

23.4. There is no suffering in the present moment

Complementary (but not opposite) to pure Awareness is pure Presence (see Section 14.3). As long as we are embodied, we can sense pure Presence. Pure Awareness is what is aware of pure Presence, while pure Presence is pure experiencing itself.

Exercise: Close your eyes and go inward and downward out of the head and into the body and sense Presence. With your eyes still closed, see if you can find any boundaries to it. If you can find any, where are they? If you cannot find any boundaries, how can there be any when your eyes are open?

In the present moment, there is no suffering. It is our identification with the past and future, both of which are nothing but concepts of the thinking mind, that keeps us in time and in suffering. We can see this directly by focusing on the present moment and noticing what happens to our suffering.

Hint: When going to bed for the night or taking a nap, try going inward and downward, and sensing Presence. This will stop the thinking mind and allow sleep to come more quickly.

In the meditation for November 29 of *A Net of Jewels* (1996), Ramesh writes,

> "The root of frustration which the civilized man feels today lies in the fact that he lives not in the present moment but for the illusory future, the future which is only a creation of brain and therefore a mere inference based on memory, a futile abstraction at best."

In the past is guilt and regret. In the future is fear and clinging. Freedom lies only in the present moment. If we think about the future, it is either the thinking mind diverting our attention from the present moment in order to further its own survival (see Section 11.9), or it is the working mind making legitimate plans in the present moment for the future actions of the body-mind (Section 11.9). The first does not reduce suffering and usually increases it. The second does not increase suffering and may decrease it.

When the thinking mind wants to reduce suffering, it plans to do it in the future. In this way, suffering is prolonged indefinitely because there will always be a future in which to reduce the suffering. The only way suffering can end is for it to happen now.

If we want our suffering to end, our intention must be for it to happen in the present moment. This is the only way to short-circuit the thinking mind. Furthermore, when our intention is for our suffering to end in the present moment, our attention is automatically directed to the present moment. Then, whatever thoughts or actions are necessary arise in the working mind rather than the thinking mind.

We can enter the present moment through several gateways:

1. Through the mindful use of a mantra (see Section 19.1);
2. Through noticing and naming our attachments (see Chapter 22);
3. Through going inward and downward and feeling the breath (see Section 24.2);
4. Through going inward and downward, and sensing Presence (see above);
5. Through focusing on our work;
6. Through focusing on the hereness and nowness of the present moment ("Be Here Now", see Section 12.1).
7. Through trusting Awareness (see Section 19.3).

Pure Awareness is timeless and changeless. We can be aware of Awareness whether our attention is inward or outward. Even though there is no suffering when we are aware of Awareness, there may be pain or discomfort (see Section 21.1). Furthermore, honest, authentic speech and action can happen only in pure Awareness when the thinking mind is absent.

Exercise: Become aware of Awareness. Are you still suffering?
Exercise: Trust Awareness. What happens to your suffering when you trust Awareness?

23.5. Inquiry into the manifestation: outward inquiry

Inquiry consists not just of the special techniques described above. It is even more a stance which inquires into the reality of all aspects of life. Its usefulness is not limited to inquiring into the existence of the "me". It can be broadened to investigate the true nature of any object, whether physical or mental, and whether internal or external. For example, What is this, really? Where is this coming from?. Don't conceptualize an answer! Investigation will immediately

show that all objects, including the body-mind organism itself, arise from the Background of pure Presence. There is no such thing as an external object (see also Chapter 9). All things arise from the Background, dissolve into the Background, and consist of the Background (immanent God, see Section 14.3).

You can see a similar effect by alternately opening and closing your eyes. When they are closed and before thoughts arise, you see a blankness, which is analogous to the Background. When you open them again, objects appear and are superimposed on the blankness. In a similar way, all objects at all times arise from the Background and disappear back into the Background whether the eyes are open or closed.

Exercise: Close your eyes, go inward and downward, and sense the background of Presence. Now open your eyes. Can you still sense the Background?

Awareness is the transcendent, unchanging Reality and the Source of the immanent Background, whether "inward" or "outward". True seeing can be facilitated by inquiring, "What is the unchanging reality of this object?", and then looking. A growing awareness of the Background and seeing that it and all of the objects in it are manifestations of Awareness is called the "direct path" by some sages (see also Section 16.1).

We can practice inquiry no matter what we are doing or what is happening because its essence is to be aware and to discriminate between what is real and what is not. Eventually, inquiry may cease to be a practice and may become simply a continuing awareness of our true nature.

As we disidentify, we see that neither the world nor the mind is our home. We will never find what we are looking for there. Our home is pure Awareness, which is nowhere and nowhen because it transcends all locations in space and time.

The questions and examples given above are only suggestions. Your intuition will suggest other questions or applications that are effective for you.

23.6. Being Awareness

We can go no further than to be what we already are, which is pure Awareness. How do we be Awareness? One way is to inquire into what it is that is aware, and to see that nothing we can be aware of can be what is aware (see Sections 18.2, 23.3). This means that we are not a thought, not a feeling, not an emotion, not a body sensation, not a perception, not any object of awareness; we are what is aware of them.

The next step is to shift our perception so that we are aware of all objects from the outside. When perception shifts in this way, we see that all objects, whether subjective or objective, are inside us and nothing is outside us. The result is that the illusion of separation disappears and suffering ends.

23.7. Some loose ends gathered

Inquiry, especially in activity, plus a deepening understanding of the metaphysics of nonduality, will alleviate suffering, bring peace, and may ultimately allow awakening or enlightenment to happen. We must remember, however, that awakening is purely spontaneous and it cannot be brought about by any efforts of the "I" or "me" since they themselves are the problem. Inquiry merely establishes the conditions whereby understanding can spontaneously deepen from the intellectual level to the intuitive level and become enlightenment.

As we have seen, every object whether we consider it to be external or internal, is a mental object. The world, the guru, the saint, the sinner, the feeling of bondage or liberation, the hallucination, the dream, all are mental objects. However, there is a difference between the guru and most other thoughts. The function of the guru or spiritual teacher is to turn the mind towards its Source and away from the guru itself. If a teacher does not do this, he/she is a false teacher because the mind must find its Source before awakening can occur. The teacher is dispensable after fulfilling this function. Indeed, we might say that the function of the teacher is to make himself/herself dispensable.

Some people seek answers to questions like, "Why is all of this happening?" or "Why is there so much suffering in the world?" Such questions always come from the viewpoint of the individual. At the individual level, there are no answers. At the level of Awareness, there are no questions. The best way to answer them is to adopt the perspective of impersonal, unmanifest Awareness, which is what we are, rather than of the individual, which is what we are not.

Ramana Maharshi termed the state of enlightenment brought about through inquiry as sahaja samadhi. He also called this the natural state, in which there is complete absorption in the Self, so there is no ego but there is still awareness of the world, which is seen to be identical with the Self. For comparison, the ultimate state of transcendence through yoga is called nirvikalpa samadhi. In that state, there is no ego and no awareness of the world, but there is pure Peace. The difficulty with it is that, on coming out of it, the ego or thinking mind tends to arise again. A third form of samadhi is savikalpa samadhi, in which there is no “me”, and the mind is totally absorbed in an object. This can occur when there is intense focus on some consuming activity, such as art, music, athletics, or science. Again, the difficulty is that the ego usually returns when the focus ends.

Chapter 24. Disidentification through meditation

24.1. Principles of meditation

At the risk of being overly repetitious, we again remind the reader that this practice, like all other practices and indeed all activity, is never done by an individual because there are no individuals. If meditation happens, it happens. If it doesn't, it doesn't.

Of all practices, meditation is perhaps the most widely used because it can be used concurrently with any other practice, or it can be the primary or sole practice, and it lends itself to use by widely differing personality and body types. There is a common misconception among meditators that the aim of meditation is simply to quiet the mind. However, the ultimate aim of all meditation is to purify the mind-body and to become aware of our true nature. Since

our true nature is pure Awareness, awareness is an essential ingredient at all times and this is the key to its effectiveness. Because pure Awareness is the Source of the body-mind, we can also say that the ultimate aim of meditation is to transcend the body-mind, which in turn is equivalent to disidentification.

Meditation simply consists of paying attention. It is possible to put our attention on any object whether it is inward or outward, or on the background or source of any object. The simplest form of meditation (but, in practice, possibly the most difficult) is to attend to the present moment (see Section 23.3). Suffering then disappears because in any present moment, there is no doer and there is no suffering.

Focusing on a task at work, on something being said, on something being read, or on any other activity, are all meditations. When the focus is on a religious symbol or image, it becomes religious or devotional worship. However, most forms of meditation are delicate processes that can be learned only from an experienced teacher.

Vipassana (concentration-mindfulness meditation) is a Buddhist meditation that is without religious dogma or doctrine (see Sections 14.6, 24.2). In this meditation, the contents of the body and mind are actively observed and investigated, without judging or trying to change or to expunge them. It can be used either in sitting or in activity, and is similar to self-inquiry (described in Sections 23.2, 24.3). Another type of Buddhist meditation without dogma or doctrine, called Zen, arose in China and was transported to other Asian countries, and then to the West (see Section 14.7).

Although focusing with intense interest on an absorbing activity such as work or play tends to bring about disidentification from the "I" because the "I" is forgotten during the activity, it always returns after the activity ends. It also does not increase experiential or intuitive knowledge of one's true nature.

Focusing on an object has the aim of quieting the mind with the intention that, from a quiet mind, the realization that there is no "me" may occur. It is this intense focus that tends to prevent thoughts from arising and allows a meditative state to set in. An object of focus may be a mantra, an affirmation, the breath, a body sensation, the third eye, an inner sound or light, or an external object such as a candle, a divine symbol, or the sounds from a meditation tape or CD. Because effort tends to prevent clear seeing in this kind of meditation, the focus must be gentle and unforced. When thoughts arise, they are noted and the attention is again gently returned to the meditation object.

If a mantra is used, as in Transcendental Meditation (see http://www.tm.org), effortlessness is achieved by letting the repetition gradually occur more easily, and the mantra to become more subtle, eventually to continue completely spontaneously, and finally to disappear. At this point the observer may disappear also, with nirvikalpa samadhi (see Section 23.5) ensuing until the observer reappears.

Many teachers teach that meditation requires sitting with the back erect, but some types of meditation, including inquiry, can also be done while lying down or walking, or in activity. When sitting, the eyes can be either open or closed, but generally people find meditating with closed eyes easier, and that is usually the way it is taught.

During meditation, the meditator frequently experiences the delightful bliss of a quiet mind. He or she soon learns that, not only during sitting meditation but also afterwards, disturbing thoughts and feelings have disappeared and peace continues, albeit usually only temporarily. These immediate rewards are powerful incentives to continue the practice. Bliss is the sense of I Am, or pure Presence (see Figure 10.1, Sections 14.3, 23.4). I Am is beautifully described in a poem by Helen Mallicoat (quoted on p. 136 of *Holy Sweat (*1987) by Tim Hansel):

I AM

I was regretting the past
And fearing the future…
Suddenly my Lord was speaking:
"MY NAME IS I AM." He paused.

I waited. He continued,
"When you live in the past,
with its mistakes and regrets,
it is hard. I am not there.

My name is not I was.
"When you live in the future,
with its problems and fears,
it is hard. I am not there.

My name is not I will be.
"When you live in this moment,
it is not hard.
I am here.

My name is I AM."

However, there can be many experiences that a meditator has to pass through before this peace endures. Here, a teacher can be of great help so that the meditator is not blocked by them. Depending on the system of meditation and the teacher, these experiences are variously called stress release, unstressing, processing, catharsis, or purification. They can be exalted and inspiring, but more often are disturbing, uncomfortable, or even frightening. These are repressed emotions that come into awareness (see Sections 17.5, 21.2), and that must be released before peace can endure. Their arising is necessary for continued progress, but they can be intense enough to tempt the meditator to abandon his or her practice were it not for continued encouragement by the teacher. Gradually they subside as disidentification progresses, and the periods of blissful and satisfying silence lengthen. There are also other signs of progress such as the appearance of exotic visual, auditory, or bodily experiences that the teacher may sometimes point to in order to inspire the meditator to continue, although they are always phenomenal rather than noumenal in nature, and, in fact, are more distracting than useful.

Question: Has meditation ever seemed to increase your fear, desire, anger, or sadness?

In addition to the need for an experienced teacher, the support of a group is very useful because meditation in a group is much more powerful than meditating alone (see Section 16.1). This does not necessarily mean that it is more peaceful because meditating in a group may accelerate the process of mind-body purification. We must expect meditation to be a long-term practice in order for it to result in the end of our suffering.

24.2. Buddhist meditation

> "Enlightenment, as understood in Buddhism, is a profoundly and thoroughly embodied experience in which we discover the awakened state in and through the body. Buddhist meditation calls us from the disconnected and disembodied conceptual world in which most of us habitually live, back into direct contact with our somatic existence. Through exploring the body in a direct and naked way, we begin to discover that far from a limited and limiting phenomenon, the body itself is actually the gateway to the vast, unlimited field of our own awareness, the “natural state” in which we can experience the freedom and joy of liberation. It is ironic, then, that for so many of us modern people, meditation is often a more or less disembodied experience in which we may even be seeking to maintain and strengthen our Western culturally reinforced separation from our sensations, our emotions, our sexuality, and our earthy, raw and rugged experience of being a body. But understood rightly, the dharma and its practices provide us with exactly the means for finding our way back"---Tibetan Buddhist teacher Reggie Ray.

Associated with Buddhist meditation is loving-kindness meditation, which is used to cultivate love towards oneself and others. Loving-kindness meditation can be brought in to support the practice of bare attention to help keep the mind open and sweet. It provides the essential balance to support our mindfulness meditation practice. It always begins with the self because it is impossible to feel compassion or love for somebody else unless we feel it for ourselves also.

The following loving-kindness meditation was adapted from pp. 19-20 of *A Path With Heart* (1993) by Jack Kornfield:

> At first this meditation may feel mechanical or awkward or even bring up its opposite, feelings of irritation and anger. If this happens it is especially important to be patient and kind towards yourself, allowing whatever arises to be received in a spirit of friendliness and kind affection. In its own time, even in the face of inner difficulties, loving-kindness will develop.

Sit in a comfortable fashion. Let your body relax and be at rest. As best you can, let your mind be quiet, letting go of plans and preoccupations. Then begin to recite inwardly the following phrases directed to yourself. You begin with yourself because without loving yourself it is impossible to love others. These phrases not only express your aspirations, but are also prayers for the support of the universe in realizing them.

> May I be filled with loving-kindness.
> May I be well.
> May I be peaceful and at ease.
> May I be happy and free.

Let the feelings arise with the words. It may help to flood the body-mind with light (see Section 16.4) when thinking them. Adjust the words and images so that you find the exact phrases that best open your heart of kindness. Repeat the phrases again and again, letting the feelings and the light permeate your body and mind.

Exercise: Practice the above loving-kindness meditation for a number of weeks until the sense of loving-kindness grows. Apply it first to yourself, then to a loved person, then to a neutral person, then to a disliked person, then to a hated person (if there is one). Notice the results in each case.

Love can also be cultivated by meditating as follows. In this practice, we not only begin with ourselves, but we also include ourselves in it when we apply it to others.

> Think "Love", then flood yourself with light (see Section 16.3).
>
> Then, think "Love" and think of a loved person, and flood both of you with light. Then do the same with yourself and a neutral person, yourself and a disliked person, and yourself and a hated person (if there is one). If the other person seems to be too distant, bring him/her close enough so that both of you are contained within the light.
>
> Finally, with each exhalation, think "Love" and flood the entire world including yourself with the light of compassion. As different people appear in your mind, they will be immersed in this light. Rest there awhile.

Exercise: Practice the preceding "love" meditations, and notice the results in each case.

Vipassana consists of two types of meditation: concentration and mindfulness (see Section 14.6). The problem of the ego begins with the "I"/other split, which causes the "I" to appear to be in the head, and the body to be separate from us (see Sections 5.12, 11.6). Then, not only does the body appear to be separate from us, but so do all other objects. Concentration meditation heals this split by asking us to become aware of our body sensations and to feel them from the inside. This attention to body sensations can be broad, encompassing the entire body, or narrow, centered on a specific sensation such as the breath or a tightness in the solar plexus or chest, but it is always gentle and never forced.

Any other body sensation is also a suitable object of attention, but it is helpful to find one that gives us a feeling of peace and comfort. This is our refuge and anchor. If our meditation object is the breath, we remain attentive to it as best we can but we let breathing happen by itself. When we notice any intentionality in the breathing, we let it go. When we meditate this way, often we will become lost in, or identified with, a thought stream. When we become aware that this has happened, we simply return gently to our meditation object. We do this as often as necessary. This will create a feeling of global relaxation or equanimity that refines and purifies the mind, and allows us to observe the body-mind in all its subtlety, far below the level of ordinary thought and emotion. Attaining this degree of concentration may take years but it leads us to the awareness that there is no self, which is the mark of enlightenment.

In *Genuine Happiness* (2005), Buddhist meditation teacher B. Alan Wallace describes mindfulness meditation as a form of inquiry (see Chapter 23). It consists of the following four types of experiential investigation: 1) investigation of body sensations; 2) investigation of feelings (whether pleasant, leading to attachment and craving; or unpleasant, leading to aversion, including hatred, aggression, anger, and hostility; or neutral, leading to mindlessness); 3) investigation of mental phenomena and their source; and 4) investigation of

the nature of reality. We then discover the three characteristics of existence: 1) all experience is constantly arising out of nowhere, changing, and disappearing into nowhere (impermanence); 2) no phenomena can create happiness or peace (unsatisfactoriness); 3) and the ultimate meaning of impermanence is that there is no self-existence in anything, either in "I" or in any other object (emptiness). We discover that meditation is like the rest of life for it does not always go the way we want it to. Then we discover that suffering ends as clinging and resistance end, in meditation and in the rest of life.

In mindfulness meditation, we experience directly what-is without trying to change it. For example, if we meditate in order to change something--whether an emotion, feeling, or sensation--we are not meditating, we are resisting. But as we know from Chapter 21, resistance is suffering. Meditation to experience what-is without trying to change it allows resistance and suffering to fall away naturally. The basics of mindfulness meditation can be learned from books and CDs (see, e.g., those by Jack Kornfield or Jon Kabat-Zinn) but, as with all meditation practices, an experienced teacher is necessary for continued progress.

Exercise: Close your eyes for a few minutes. After the mind has settled down somewhat, focus on your breath and feel it from the inside. While still feeling the breath, do you notice any thoughts arising? From what do they arise? When they disappear, into what do they disappear? What does this experience imply about the existence of a thinker?

24.3. Inquiry in meditation

Self-inquiry puts attention right at its Source. We can practice this in the following meditation:

Exercise: Close the eyes and sit upright. Go inward and downward and sense pure Presence. When the sense of pure Presence has stabilized, ask, What is it that is Aware of Presence? and then look (see Section 23.3).
Now rest in Awareness.
Can you see that Awareness is what you are?

After some experience, the prompts are no longer necessary. Meditation by inquiry is possible whenever the mind is not overly occupied with other tasks, such as on walks, while doing mindless activity, or while sitting quietly with eyes either open or closed. When the eyes are closed, it is easy to see that all thoughts bubble up causelessly from the background and then disappear back into it. These bubbles of mental activity are no different from any other forms that appear in Consciousness, whether the eyes are open or closed. It is only when the intellect becomes active and conceptualization begins (separating and naming, see Section 9.2) that thoughts, feelings, emotions, and body sensations appear (see Section 11.1), and only when identification begins that they appear to be separate objects (see Section 11.4).

When the eyes are open, we seem to be localized in the head, but when they are closed, we seem to be everywhere. Yet, in Section 9.2, we saw that the mind includes all objects, and the distinction between internal and external is purely conceptual. When the eyes are open, "external" objects appear to have distinct, stable, three-dimensional forms, separate from each other and from the body. That is why they are so persistent and difficult to see through--that is the illusion of Maya (see Sections 12.7, 20.5).

Chapter 25. Love finding Itself

As a dualistic concept, love is the polar opposite of hate. However, we have already seen in Chapter 16 that pure Love is nondual, not dual. Therefore, Love (capitalized) is equivalent to Reality. Being nondual, it has no dual opposite.

On p. 269 of "*I Am That*" (1984), Nisargadatta says,

> "I find that somehow, by shifting the focus of attention, I become the very thing I look at, and experience the kind of consciousness it has; I become the inner witness of the thing. I call this capacity of entering other focal points of consciousness, love; you may give it any name you like. Love says, "I am everything". Wisdom says, "I am nothing". Between the two, my life flows. Since at any point of time and space I can be both the subject and the object of experience, I express it by saying that I am both, and neither, and beyond both."

We saw in Section 23.5 that by inquiring into the true nature of the manifestation we could see that it consists of nothing but pure Presence. Now we see that the manifestation is also an expression of Love. (Stated differently, it is a reflection of Love, and We are its Source.) Because Love is nondual, its expression is also nondual. However, until we become sensitive to nondualistic expression, it may be difficult to see it since it is not a thought or feeling, and cannot be perceived by the senses.

The following practice helps to sensitize ourselves to the Background (see Sections 14.3, 23.4, 23.5), whether our eyes are open or closed:

Exercise: Close your eyes, go inward and downward, and sense the Background of pure Presence. Now open your eyes. Can you still sense the Background?

Being nondual, Love will be seen as immanent in every thing, no matter how it appears dualistically. If we are able to see this, then everything without exception (even suffering!) will be seen as a blessing, and nothing will be seen as a curse.

The above quote by Nisargadatta shows that love practices (such as the practices of Chapter 16, Section 24.2) help us to see that we are everything, while wisdom practices (such as the practices of Chapters 20, 23) help us to see that we are nothing. Heart and intellect must work together. If we understand intellectually but not heartfully, there is no completeness or fulfillment for us. If we understand heartfully but not intellectually, the same applies.

Chapter 26. Very short summary

The following concepts, like all concepts, cannot describe Reality, but, unlike most concepts, they point to Reality.

1. The premise: Consciousness is all there is. Another word for Consciousness is the impersonal, yet intimate, I.

2. The conclusions:

I am not an object or entity.
Objects and entities as such are never real.
Whatever happens happens. Whatever doesn't doesn't.
There is no doer, so there is no choice.
The entire manifestation is an expression of Love.

3. The practice: Don't believe this—look and see it for yourself!

Appendix. My resources and teachers

The following resources are the ones that I have found most valuable on my spiritual journey. They are only a few out of the thousands that are available. The comments about them are my own and are purely subjective.

1. By far, the two teachers who have influenced me most are the jnanis, Ramesh Balsekar and Wei Wu Wei. Ramesh's latest books, *A Personal Religion of Your Own* (2006), [which I think is one of his best], *The Relationship Between 'I' and 'Me"* (2006), *Let Life Flow* (2006), *Seeking Enlightenment, Why?* (2005), *Nuggets of Wisdom* (2005), *The one in the Mirror* (2004),*The Seeking* (2004), *Peace and Harmony in Daily Living* (2003), *The Ultimate Understanding* (2002), *Sin and Guilt--Monstrosity of Mind* (2000), and *Who Cares?* (1999), are good, readable summaries of his current teaching. Another one, *A Net of Jewels* (1996), consists of meditations from his earlier books, two for each day of a year. Of the earlier books, I highly recommend two: 1) a metaphysical one, *The Final Truth* (1989); and *2)* a translation of, and commentary on, the *Ashtavakra Gita* entitled *A Duet of One* (1989). (Another highly regarded translation, without commentary, of the *Ashtavakra Gita* called *The Heart of Awareness* (1990), by John Richards, is available at http://www.realization.org/page/doc0/doc0004.htm.) Ramesh's books and tapes, and information about his satsangs, are available from Wayne Liquorman's website, http://advaita.org. Wayne was one of Ramesh's first students to awaken, and was later instructed by Ramesh to teach also.

An excellent website devoted to Wei Wu Wei and run by Matthew Errey can be found at www.weiwuwei.8k.com. Many of Wei Wu Wei's books are newly in print and available from www.sentientpublications.com. Eight of them are offered there for the bundled price of $89 (a fantastic bargain!). All of these books are excellent—but my favorite is *Posthumous Pieces.*

2. The teacher next most influential to me has been Francis Lucille, whose schedule can be found at www.francislucille.com. Francis cannot easily be categorized as either bhakta or jnani. I consider him to be an excellent teacher because of his powerful intellect and the clarity of his answers to questions. He has written three clear and lucid books, *Eternity Now* (1996), *The Perfume of Silence*, and *Truth Love Beauty* (2006), which are available from his website.

3. In his books, *As It Is* (2000), *All There Is* (2003), and *Invitation to Awakening* (2004), Tony Parsons gives a clear and profound description of what life after awakening is like. His website is at www.theopensecret.com, which also contains instructions for obtaining his books.

4. Even though I warn in Section 17.1 against the dangers of misinterpreting the scriptures, I highly recommend the works of Ramana Maharshi, who is considered by many to be the greatest Indian saint of the twentieth century. His *Talks with Sri Ramana Maharshi* is a modern scriptural classic (first published in 1955, it has been reprinted ten times and is still in print). A website at http://www.ramana-maharshi.org is devoted to his works, most of which can be downloaded for free. Particularly helpful is Ramesh Balsekar*'s* book, *Pointers From Ramana Maharshi* (2008) because it is consists of a few selected talks with Ramesh's interpretations, the teaching of a saint as brought to us by a sage. Also, a nicely organized condensation of the talks themselves is given by David Godman in *Be As You Are* (1985).

5. The best known book containing the dialogues of Ramesh's guru, Nisargadatta Maharaj, is *I Am That* (1984), which can be freely downloaded from http://www.celextel.org/home.html. Another book, *Pointers From Nisargadatta* (1982), written by Ramesh, combines the enlightened teaching of Nisargdatta with the enlightened writing of Ramesh in a concise, readable book of short chapters.

6. An excellent summary of the basic teaching of the Buddha in its purest form, without the sometimes spurious additions and erroneous embellishments of later commentators, can be found in *What the Buddha Taught* (1974) by Walpola Rahula. Another excellent book, *Dancing With Life* (2008) by well-known Buddhist meditation teacher Phillip Moffitt (website http://www.dancingwithlife.org/index.html) is a handbook for experiencing the Four Noble Truths of the Buddha.

7. B. Alan Wallace is a renowned Western Tibetan Buddhism teacher. His book, *Genuine Happiness* (2005) is an excellent introduction to the teachings of Tibetan Buddhism. His website is located at http://www.alanwallace.org/.

8. Ajahn Sumedho, senior monk at Amaravati Buddhist Monastery in Hertfordshire, England is the author of the insightful and practical free downloadable book "Intuitive Awareness" (2001), which can be found at http://www.buddhanet.net/pdf_file/intuitive-awareness.pdf. He is the only spiritual teacher I know of who advocates simply trusting Awareness as the basis of all spiritual practice.

9. Candice O'Denver is a modern sage of nonduality who teaches Awareness/Presence on her website at http://www.greatfreedom.org/ and in her book "The Basic State" at http://www.greatfreedom.org/The_Basic_State.pdf.

10. Rupert Spira (http://www.rupertspira.com/), a student of Francis Lucille, excels in the nondual expression of the heart. His book, *The Transparency of Things* (2008) is a masterpiece in its investigation of the nature of experience.

11. Greg Goode (http://www.heartofnow.com/) is unexcelled in philosophical understanding among nondual teachers. He is the author of *Standing in Awareness* (2009), a short, exceptionally clear book of pointers and exercises in nondual understanding; and *Nondualism in Western Philosophy* (2007), a series of pointers to how Western nondualism can assist with one's self-inquiry. Both are available from http://heartofnow.com/files/links.html .