Chapter 2: Either/Or Logic and Beyond

Most people perceive and interpret reality in terms of either/or: someone is either good or bad, friendly or unfriendly, intelligent or stupid, loving or unloving—and the list could be continued indefinitely, not only for qualities of people but also for anything else. Thus, reality is perceived in terms of mutually exclusive opposites. But is reality really like that? Or is this opposition our creation due to our conscious or unconscious use of either/or logic? And what are the consequences of using either/or logic for our relationships, society, the world, and ourselves?

Either/Or Logic

Either/or logic is the most commonly used logic, which has been passed on to us from ancient Greek philosophers, especially Aristotle. According to this kind of logic or way of thinking, A is either B or not B. For example, a flower is either red or not red, a person is either honest or not honest, a statement is either true or not true, a map is either universal or not universal, you either love me or don't love me, you are either for me or not for me, which means you are either for me or against me. The list of examples could be continued endlessly because our culture and our lives are permeated by this kind of logic. Even the questions we ask are usually formulated in terms of either/or logic: Is it this or that? Such questions condition us to give answers also in terms of either this or that. And thus it is usually taken for granted that it must be either this or that. Few people realize that other kinds of logic may lead to other types of questions and answers. However, sometimes there is an opening into other ways of thinking which may take a very simple form. For example, someone may say that a statement is not completely false, but contains a grain of truth.

Although Wilber is well aware that there are other kinds of logic besides either/or logic and admits these kinds of logic in his map of the Kosmos, in one fundamental sense his map is based on either/or logic: any particular holon belongs either to one level of the hierarchy or to another level and something is either this holon or that holon. Both/and logic, fuzzy logic, and network logic or thinking can help us to go beyond these limitations.

Both/And Logic

One alternative to either/or logic is both/and logic. According to this kind of logic, A is both B and not B. If "not B" is C, then A is both B and C. This kind of logic seems absurd to many people. However, there is much evidence that it is an appropriate logic. As I mentioned above, in the popular culture there is sometimes inkling that something may be both true and false. Quantum physics revolutionized our thinking through the discovery that light may be both a particle and not a particle phenomenon, both a particle and wave phenomenon.

Whereas either/or logic is antagonistic, both/and logic is reconciliatory. If you propose a theory that is opposed to mine, according to both/and logic, I need not refute your theory and possibly fight with you as it so often happens between adherents of contradictory theories; I can embrace your theory and you because your theory complements mine. Having two theories is therefore better than just one; it is enrichment, whereas according to either/or logic, it may be a thread. It is possible, of course, that one of the two opposing theories can explain more phenomena than the other. But this need not mean that therefore the other theory is useless. It may offer something that is lacking in the theory with greater explanatory power (see Chapter 6).

In Chapter 1 I have already pointed out that plants (and animals) may be understood in terms of both cell theory and the organismal theory, which means that they can be seen as consisting of cells and not of cells. As a consequence we can see both a hierarchy at this particular level and not a hierarchy, that is, unity. Thus, both a hierarchical and nonhierarchical view can be accepted. This is contrary to Wilber's contention that only the hierarchical view makes sense. Since I can embrace both/and logic, I can conclude that both Wilber's map and my mandala maps that I shall present in the second part of this book, are maps of reality. However, one difference between these two maps is that the mandala maps include the Wilber map, whereas the Wilber map does not comprise the mandala maps (see Chapter 5).

Wilber (2000a) applies both/and logic in many instances. For example, he acknowledges that spirit is both transcendent and immanent. As I mentioned already in Chapter 1, unfortunately the immanent aspect of spirit, which is Spirit (with a capital S) is not explicitly included in his AQAL map. However, he indicated it in other contexts (e.g., Wilber 2001: 69).

Wilber applies both/and logic also to movement in time, which is both evolutionary and involutionary; also, the manifestation of spirit is in time and beyond time (see Chapter 3). As the Heart Sutra states: "Form is emptiness, and emptiness is form", whereby form can be seen in time and emptiness is beyond time.

All this shows that Wilber has gone far beyond the limits of either/or logic, but with regard to the basic holonic structure of his AQAL map he adheres to hierarchical thinking, that is either/or logic.

Fuzzy Logic and Fuzziness

Besides either/or logic and both/and logic still other types of logic have been developed, especially during the last century. One of them is three-valued logic in which statements may be true, false, or indeterminate. This logic is useful when we deal with situations that may be indeterminate such as in quantum physics. In multi-valued logic there are many values between true and false. Almost two thousand years ago, Jaina logicians in India developed a seven-valued logic. According to this logic, there are three primary truth values: "true", "false", and "indefinite". The other four values are "true and false," "true and indefinite," "false and indefinite," and "true, false, and indefinite." "Every statement is regarded as having these seven values, considered from different standpoints" (The New Encyclopedia Britannica, Macropedia 21 [1994]: 210).

Finally, instead of having discrete values, in fuzzy logic there is a continuum between the extremes of true and false ranging from 0% true (=false) to 100% true. But it is not only logical truth or falsehood that are fuzzy. Many phenomena are fuzzy so that Kosko (1993) in his book on "Fuzzy Thinking. The New Science of Fuzzy Logic" referred to a "fuzzy world view**."** This worldview is indeed revolutionary. Its importance and far-reaching consequences cannot be emphasized enough. It allows us to perceive the world differently: on this view, the world is not just black and white, but has a rich and varied gradation of grays; it is not just discrete colors, but has also a fascinating mingling of colors. Most of all, it is not only categorical, this or that, but a continuum spanning the categories.

In our culture, especially among so-called educated people, it is almost preposterous and irritating, if not ridiculous, to refer in all seriousness to fuzziness. The ideal very often has been and still is to do away with fuzziness as much as possible, that is, to reduce everything to clear-cut, unambiguous categories. However, the real world is not always so clear-cut and unambiguous. Therefore, if we want to better understand the

real world, we have to learn to speak a language that comes as close as possible to the real world. Ultimately, there is, of course, no language that will reveal absolute reality as it is. But with regard to relative reality, we have the choice between different languages based on different kinds of logic. Either/or logic will allow us to understand some simple aspects of reality. For example, if in the continuum from black to white we just want to focus on the extremes, black and white, either/or logic will be sufficient to do that. However, if we want to deal with the whole range from black to white with all the gray tones in between, fuzzy logic will be required. Thus, fuzzy logic will make it possible to greatly increase the scope of our understanding because there is so much fuzziness in the real world.

Our everyday life is permeated by fuzziness. Kosko (1993: 126) illustrated this by the response of an audience. When we ask an audience who is married, a clear-cut answer may be obtained because marriage is an institution regulated by law. However, when we ask who is happy, or honest, or moral, or jealous, or intelligent, or tall, or overweight, many people find it difficult to give a clear-cut answer because any of these issues and many others are fuzzy: one can be more or less intelligent, more or less happy, etc. Where does one draw the line between happy and unhappy or tall and short? Any line is arbitrary. For the extremes, the answer is easy. But between the extremes—and many people are between the extremes—only a more or less arbitrary answer is possible. A very close look may even reveal that the extremes are not totally free of fuzziness because even a happy man may still harbor very small pockets of unhappiness (see below under Yin-Yang). Thus, the recognition of fuzziness may create awareness that we are much "more or less" than we normally think we are according to the labels we carry. Kosko (1993: 127) wrote: "We are all left, right, center, straight, gay, bi, cool, square, plain, for, against, and indifferent." We may be any of these only to an extremely small degree, or only potentially. But knowing that we are all that—and much more—can help us to connect to others who appear to be very different because they occupy a different place in the continuum.

It is astounding how much resistance against fuzziness we find in our culture. Because we have been deeply conditioned against fuzziness, many people feel more secure and more comfortable if, consciously or subconsciously, they can hide behind clear-cut labels and categories. There are, however, also people who accept the idea of fuzziness and fuzzy logic, but object to the wording only: they just do not like the words 'fuzziness' and 'fuzzy'. Without changing any of the meaning, they could replace 'fuzziness' by 'continuum' and 'fuzzy' by 'continuous' and thus refer to 'continuous logic'

instead of 'fuzzy logic'. Other alternatives are 'gray logic' or 'cloudy logic' (Kosko 1993: 292). I prefer the words 'fuzzy logic' and 'fuzziness' because they are commonly accepted in the literature on logic and have been used by Lofti Zadeh, the inventor of fuzzy set theory (see Kosko, 1993).

Fuzzy set theory deals with sets. How are sets defined? In traditional either/or logic the definition of a set applies to all members of the set. Therefore, one either is a member of a set or one is not, one is a man or one is not, one is a woman or one is not. According to fuzzy logic, which is also called fuzzy set theory, this changes radically: according to fuzzy set theory, membership in a set ranges from 0% to 100%. Thus one can be a partial member of a set; for example, a 50% member of the set of men and at the same time a 50% member of the set of women. We know that such partial members do indeed exist. There are people who are physically intermediate between a typical man and woman. These people often have to undergo painful operations to conform to our categories of either/or logic. They are violently forced into our man-made categories. In contrast, fuzzy set theory allows for the whole range of intermediates.

Fuzzy set theory does not only deal with relatively rare cases of intermediates such as the physical intermediates between men and women. More importantly, it reveals and emphasizes fuzziness where we did not expect it or do not notice it sufficiently. As a result, it changes our view of the world. Kosko (1993) describes many examples of fuzzy sets in science, religion, ethics, law, politics, and other aspects of life. I consider Kosko's book one of the most important books of the 20th century because of its fundamental relevance to all aspects of life and its potential to beneficially transform our individual lives, society, and the whole world.

Logic and Wilber's AQAL Map

Fuzzy logic is relevant to most, if not all, aspects of Wilber's map, that is, to the three or four major dimensions (The Big Three or four quadrants), levels, lines, states, and types. Here I want to focus on levels, which means hierarchy. How do fuzzy logic and fuzziness affect hierarchies? I think they dissolve them. Let me explain.

To obtain and retain a hierarchy, the following two conditions must be fulfilled:

1. The levels that function as levels of the hierarchy must be distinct and mutually exclusive (Figure 2–1a). Thus, for example, according to cell theory, in multicellular organisms the levels of the cell and the whole organism are distinct and mutually exclusive: the organism is not a cell and vice versa.

2. The upper level holon must completely include the lower level holons. Such complete inclusion requires that the set of lower level holons contains all members all or none (Figure 2–2a). In a multicellular organism, according to cell theory, this means that the organism contains only cells as lower level holons on the cellular level.
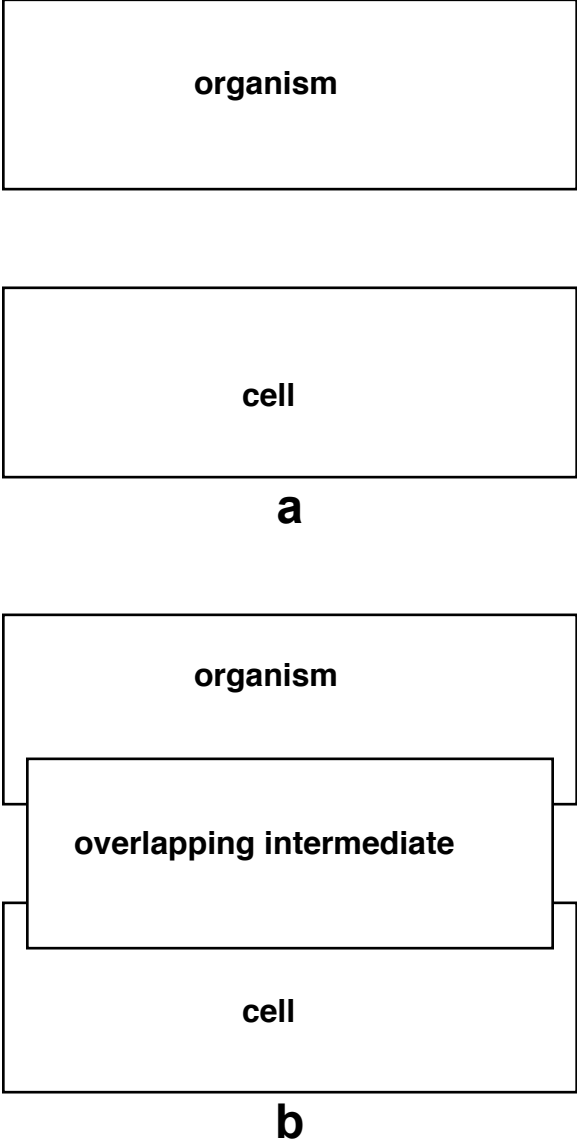

Figure 2–1. a. Two distinct and mutually exclusive levels of a hierarchy representing the levels of organism and cell. b. Overlapping levels that violate the condition of distinctness and mutual exclusivity.
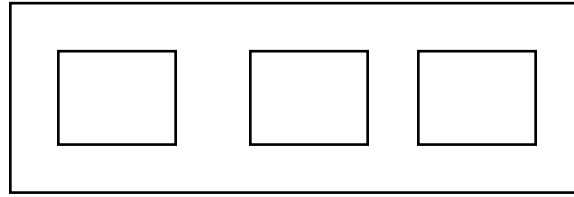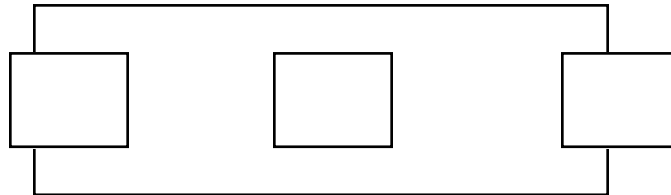
Figure 2–2. a. All holons such as cells (represented by the small boxes) contained within the set of cells, that is, the set of holons; b. Two of the holons not contained within the whole set, hence the set of cells is a fuzzy set.

Now let us examine whether these two conditions are always fulfilled at the two levels of cell and organism. It appears that they are indeed fulfilled in many cases, provided we accept cell theory. But there are also cases where the two conditions are not fulfilled even if we accept cell theory. For example, in some algae such as *Derbesia* the whole organism contains many nuclei (Figure 2–3a); these nuclei are not surrounded by incomplete cell walls as it is usually the case in algae and plants. Is this organism the equivalent of a multicellular alga that lacks cellular partitioning, or is it equivalent to only one huge cell that has become multinuclear? It is neither one, nor the other. This organism is intermediate between unicellular and multicellular algae because it shares properties of both. With the unicellular algae it shares the lack of internal partitioning by incomplete cell walls, whereas with the multicellular algae it shares the possession of many nuclei. This means that it is at an intermediate level between a single cell and a multicellular organism: it overlaps the two levels (Figure 3–1b) and as a result the two levels are no longer distinct and mutually exclusive, that is, the first condition for a hierarchy is no longer fulfilled.
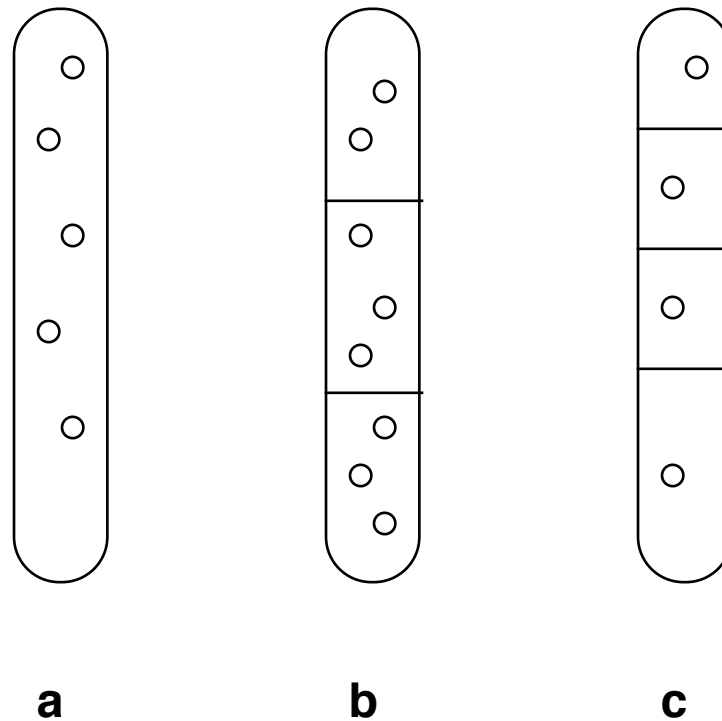
Figure 2–3. Diagrams of the algae *Derbesia* (a), *Cladophora* (b)*, and Spongomorpha* (c). The little circles represent nuclei. Explanation in text. For more realistic drawings of these algae that also show the branching of the filaments see Moore et al. (1995: 70).

There are other algae whose organization is more or less intermediate between that of *Derbesia* and the common cellular organization shown in Figure 2–3c. For example, *Cladophora* has incomplete partitioning by walls as it is typical for the so-called cellular organization, but each unit contains more than one nucleus (a typical cell has only one nucleus). As a result there is "a complete range of intermediates between unicellular, multinucleate and multicellular, uninucleate [algae]" (Kaplan and Hagemann 1991: 698). This continuum spans and unites the levels of the cell and the multicellular organism and thus shows that these two levels can dissolve even within the framework of cell theory, at least in certain situations. It should be noted that such situations are not restricted to certain algae, but occur also in plants and animals.

The reason why the two levels dissolve is because they are no longer distinct and mutually exclusive: they are fuzzy, a fuzzy set.

Considering the same algae of Figure 2–3, do they fulfill the second of the above conditions that is required for a hierarchy, namely, the condition that all lower level holons must be contained in one set? No, this condition is not fulfilled either, because some of the lower level holons are only partially contained within the set of cells (Figure

2–2b). These holons stick out, so to say, because they have a combination of properties of a single cell and a multicellular organism. They belong partially to the set of cells and partially to the set of (multicellular) organisms. This means that these holons of the lower level form a fuzzy set.

In conclusion, we can see that the fuzziness with regard to both conditions dissolves the hierarchy. A hierarchy is based on distinctness, mutual exclusivity, categories. It cannot be maintained in the face of fuzziness. Since there is so much fuzziness in this world, this does not lend great support to hierarchies. However, we can maintain hierarchies as long as we exclude all those cases that introduce fuzziness. How much of the whole Kosmos does that leave for hierarchies? I don't know. One can also try to press the recalcitrant cases into the hierarchies and then end up with somewhat limping hierarchies. Or one can "simply" ignore everything that does not fit into hierarchies, which really prevents us from a deeper understanding. (In a review of Wilber's [2006] *Integral Spirituality*, Frank Visser [http://www.wilberwatch.blogspot.com/] noted that in this book Wilber used the word 'simply' 268 times, and he added that this is "simply too much" "forced simplification"). In any case, fuzziness creates problems for hierarchies and hierarchical thinking. Maybe just a little fuzziness can be patched up, but more fuzziness leads to the demise of hierarchies.

So far I have illustrated fuzziness only at two levels in the scientific dimension (the right half) of Wilber's map. Note that I accepted cell theory as the basis for the whole argumentation. This means that even from the point of view of cell theory, the hierarchy at the levels of the cell and the (multicellular) organism can be maintained only to a limited extent, not in general. If in addition we take into consideration the limited validity of cell theory as I pointed it out in Chapter 1, then the limited hierarchy turns out to be only one aspect of reality, one perspective that needs to be complemented by a continuum view, the view that is offered by the organismal theory (see Chapter 1). In other words, with regard to the levels of the cell and (multicellular) organism, hierarchical organization can be validated only to a limited extent and this limited hierarchy is only one aspect of manifest reality.

Now let us look at the other two dimensions of Wilber's map, the dimensions of individual and collective consciousness. First, individual consciousness, the upper left quadrant of his map. Wilber has referred to it as the spectrum of consciousness, a spectrum that comprises different levels. He distinguished varying numbers of levels, ranging from three to sixteen or seventeen. The question is: How distinct are all these levels? Are they sufficiently distinct to provide the basis for a hierarchy? Wilber has

often referred to them as waves, even as "overlapping waves" (Wilber 2001: 43). If they are indeed overlapping, that may dissolve the hierarchical structure.

Finally, what about the cultural dimension of Wilber's map, the lower left quadrant? As I pointed out already in Chapter 1, there is also overlap between levels: features of upper levels are already present at lower levels such as the archaic and magical levels. In a hierarchy this should not happen.

It seems to me then that in the left quadrants the situation is not very different from that in the right quadrants that refer to science: a hierarchy may be salvaged to a limited extent as one aspect of manifest reality, but if we consider the whole picture, so much fuzziness is introduced that the hierarchy becomes questionable.

Hierarchy as a Fuzzy Set

So far I have looked at the concept of hierarchy only in terms of either/or logic, assuming that, at least from one perspective, there either is a hierarchy or not. I specified conditions for a hierarchy and then I demonstrated that there are cases in which these conditions are fulfilled and other cases in which they are not fulfilled, which means that there are cases that can be seen as a hierarchy and others that are not: either a hierarchy or not.

As I already pointed out, there is a place for either/or logic, but its application is limited. The above discussion illustrates the limitations of either/or logic. When the conditions for a hierarchy are completely fulfilled, either/or logic works well: we can see that these cases are hierarchical. But what if there is only a little deviation from the conditions? Do we conclude then that these cases are not hierarchical? In a strict sense, they are not. But since they deviate only a little, we feel that, although not strictly hierarchical, they are still close to being hierarchical. But the more the cases deviate from the conditions, the less hierarchical they are. Looking at it this way means that cases may be more or less hierarchical, not just either hierarchical or not. In other words, hierarchy is a fuzzy set in which any particular case can have a membership that may range from 100% to 0%. A 100% membership means that the case represents a typical hierarchy or a hierarchy in the strict sense. A 0% membership means that the case is definitely not hierarchical. Cases between the two extremes are more or less hierarchical.

As far as I know, Wilber does not explicitly acknowledge the fuzziness of hierarchy and hierarchical thinking. In many instances he makes it very clear that "the Kosmos is

a series of nests within nests within nests indefinitely" (Wilber 2001: 40). "You can't escape these nested orders" (Wilber 200: 26). This means that there are holons at different levels so that the upper level holon includes and transcends the lower level holon.

But now comes the puzzle. Although Wilber keeps insisting that manifest reality is hierarchical, he prefers to refer to waves instead of levels because the so-called levels are not " radically separate, discrete, and isolated from each other" (Wilber 1999: 267). Waves "interpenetrate and overlap (like colors in a rainbow)" (Wilber 2000a: 215). To me this does not sound hierarchical in the strict sense. It seems to loosen considerably the way Wilber himself defined a hierarchy (holarchy) as an inevitable *ranking* system that is all-encompassing: "trying to get rid of ranking is itself ranking" (Wilber 2000b: 26) and "denying hierarchy is itself a hierarchy" (Wilber 2000b: 26). To me his emphasis of waves and continuity instead of distinct levels seems to indicate that he recognizes the fuzziness of hierarchy, although to my knowledge he does not explicitly acknowledge that reality can be more or less hierarchical. But if he does indeed accept the fuzziness of hierarchy, much of my above criticism that was based on his strict definition of hierarchy as a ranking system applies only partially. I do, however, maintain that even fuzzy hierarchical thinking can represent only one aspect of manifest reality and needs to be complemented by other ways of thinking to obtain a more complete picture of manifest reality (see Chapter 4).

Yin-Yang

Yin-Yang is highly relevant to our discussion. According to Daoism, Yin and Yang are the two major forces in the Kosmos that, in the widest sense, represent all polar opposites such as female and male, earth and heaven, matter and spirit. They are not distinct and not mutually exclusive: Yin contains Yang and vice versa. This is represented in the Yin-Yang symbol by a white dot (Yang) in the black Yin and a black dot (Yin) in the white Yang (Figure 2–4), which means that either/or logic does not apply: nothing is only either Yin or Yang; therefore, nothing is clear-cut; everything is fuzzy. In a sense Yin-Yang is even more radical then fuzzy logic. In fuzzy logic, the two extremes of 0% and 100% membership exist at least as a possibility. Yin-Yang denies even this possibility because nothing can be 0% Yin or Yang, and nothing can be 100% Yin or Yang. Therefore, either/or logic can apply only as an approximation when Yin or Yang comes very close to 0% or 100%. Since a hierarchy in the strict sense is based on either/or logic, hierarchy too, if it is at all admitted, can at best exist only as an

approximation to reality. Thus Yin-Yang curtails hierarchies and hierarchical thinking even more severely than all the other critical considerations I have presented so far because it eliminates the 100% fulfillment of the two fundamental conditions of hierarchies in the strict sense according to which the Kosmos is seen as nests within nests.

Yin-Yang is fundamentally different from our usual thinking in terms of mutually exclusive categories, in terms of either black or white. Strictly speaking, there is no real black and white according to Yin-Yang. What appear as black and white are only extremes of gray. Black and white exist only as approximations. Basically everything is gray. This is the opposite to either/or logic according to which everything must be either black or white and what appears to be gray is essentially either black or white. In a literal sense, few people may go so far to deny the existence of gray completely, but if black and white are taken as metaphors for mutually exclusive categories such as love and hate, or good and evil, many people, consciously or subconsciously, follow either/or logic. And hierarchical thinking in the strict sense, not as a fuzzy set, is also based on this black or white thinking.

If we think in terms of black or white in a metaphorical sense, then the world is fundamentally divided into all the mutually exclusive opposites that black and white represent symbolically. And division is the basis for conflict, aggression and war. If, however, everything is gray in a metaphorical sense according to Yin-Yang, then everything is basically undivided, although there are the two major forces of Yin and Yang. This has far-reaching consequences. It means, for example, that nobody can be only good or only evil. Even if we are good, we also have evil in us, if only in traces, and thus we are connected to the man who is predominantly evil. Hermann Hesse in "Siddhartha" put it this way: "The world itself, being in and around us, is never one-sided. Never is a man or a deed wholly Samsara or wholly Nirvana; never is a man wholly saint or sinner" (Hesse 1957: 115).

Can we apply Yin-Yang thinking to the opposites of hierarchy and continuum? If we do so, we come to the surprising conclusion that there is no 100% hierarchy and no 100% continuum. In other words, there is no hierarchy in the strict sense and no complete continuum. There is always at least a trace of the continuum in a hierarchy and vice versa. Consequently, those who think in terms of hierarchies and those who prefer a continuum view are linked, although they operate at opposite ends of the same hierarchy-continuum spectrum.

Another consequence of Yin-Yang is that there is no 100% right and 100% wrong. This is an important warning for all those—and there are many—who think that they are completely right and others, who contradict them, are completely wrong. It is a warning to all those who have the urge to possess the absolute. And it is a warning to those who think that they actually possess the absolute and thus have often done much harm to themselves, to others and the world.
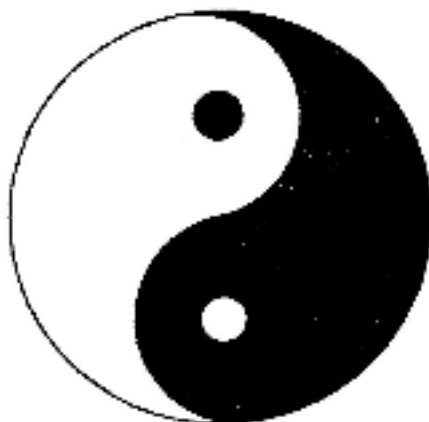

Figure 2–4. Yin-Yang symbol.

Dialectics

To some extent dialectics can provide yet another perspective. The relationship of at least some levels can be understood as the dialectical movement from thesis to antithesis to synthesis. For example, if the mythic level is seen as the thesis, then the rational level is the antithesis, and the level of centauric vision-logic the synthesis. This means that, contrary to the holarchical view, the rational level does not include and transcend the preceding mythic level, but is the negation of that level. To some extent human history as well as personal development is such a movement from one extreme to its opposite extreme. For example, the era of romanticism was a reaction to the so-called enlightenment that emphasized reason. Since in terms of Yin-Yang at least traces of the thesis are retained in the antithesis, romanticism was not totally devoid of reason, although it placed the major emphasis on feeling and emotion. Consequently, there remained at least some connection between the enlightenment and romanticism, reason and feeling/emotion.

Network Thinking

Network thinking (or network logic) also surpasses simple either/or logic since in a network everything is interconnected and therefore either this or that do not exist in isolation. An "evil" deed considered in isolation may indeed appear totally evil, but if it is seen in its netted context, it may appear far less evil and even turn out to be good to some extent. For example, if killing one person prevents the killing of hundreds or thousands of people, then killing that person is not totally evil.

Network thinking applies to all areas of existence. It has become very important in science, especially in disciplines such as ecology (see, e.g., Capra 1996). And the recognition of networks can have far-reaching consequences. For example, recognizing networks in medicine can be of crucial importance for the prevention and treatment of many kinds of diseases. It can be a matter of life or death.

Wilber recognizes the importance of networks in many domains such as, for example, in natural science, that is, the right hand quadrants of his map. However, he excludes them from the most basic structure of his map because that structure is linear and hierarchical. What I want to propose here is to consider the network view of reality or the Kosmos, including ourselves, as another perspective besides the hierarchical view, nonhierarchical holism (undivided wholeness), the continuum view in terms of fuzzy logic, and the Yin-Yang view. Networks need not necessarily entail a flatland view (although they may, as Wilber has emphasized). It has even been pointed out that in the ancient world, the work of the holy spirit was known as the net, indicating that everything is interwoven.

How then can the network view be applied to the basic structure of Wilber's map? 1. We have to question Wilber's categorical insistence that levels cannot be skipped. If, for example, as already mentioned in Chapter 1, a shaman can connect from the magical level to transpersonal levels and if other connections are also possible, then the linearity of the stages (basic structures) gives way to a network. 2. It appears evident that there are also cross-connections between the lines. For example, in the upper left hand quadrant, the cognitive, emotional, interpersonal, psychosexual, moral, spiritual and yet other lines may be interconnected in a netted fashion. (According to Wilber [e.g., 2006: 25], they are separate, yet he also emphasized cross-training between lines which implies interconnections). 3. Similarly, the four quadrants may be interconnected. For example, the two left hand quadrants that represent the individual and collective are bridged through intimate relations between people, and the right and left hand

quadrants that represent the interior and exterior are connected because the interior and exterior are also related.

The network view of reality reminds us that everything is interconnected and thus it provides many bridges that have become obscured or forgotten due to the fragmenting nature of thought and language. Especially in our modern world that is torn apart by many conflicting ideas, ideologies, religions, and beliefs, network thinking can be highly beneficial and healing.

Either/Or in Wilber's Map and Philosophy

Although Wilber appreciates and employs all of the above ways of thinking, he often tends to think in terms of mutually exclusive categories, in terms of either/or. This is a reflection of a general and widespread tendency in our culture due to a profound conditioning to think this way. Even if we are aware of it, we easily fall prey to either/or (and I do not want to claim that I am totally immune to it).

Wilber claims that he operates at the level of vision-logic, which is beyond either/or logic because it involves "bringing together multiple perspectives while unduly privileging none" (Wilber 2000d: 26). Yet in some fundamental ways he privileges either/or logic in his AQAL map and in his general philosophy. To illustrate how this can become limiting, if not dogmatic, I give just a few examples; many more could be added.

1. According to Integral Post-Metaphysics, "in the manifest world, there are no perceptions, only perspectives. Put bluntly, perception, prehension, awareness, consciousness are all 3rd-person, monological abstractions with no reality whatsoever" (Wilber 2006: 255).

   I would like to suggest that we need not debate whether in the manifest world there are only either perceptions or perspectives because we can see the manifest world both in terms of perceptions *and* perspectives, so that "perceptions" and "perspectives" can be seen as two different perspectives of the manifest world, although I think that the "perspectives" perspective is of enormous importance and usefulness and has far-reaching advantages.

2. According to Wilber's AQAL map, the basic structure of manifest reality is a holarchy that comprises holons at increasingly inclusive levels. Although a holarchy offers an integration, it also creates fragmentation because reality is fragmented into holons and levels so that something must be either this holon or that holon and belong to either this level or that level. Nonetheless, as I pointed

out already, a holarchy is useful, but if it is the only perspective, it is too limiting. Other perspectives that I proposed are enriching because they add other dimensions.

3. Wilber attaches great importance to what he called the pre/trans fallacy. In this fallacy, "pre" and "trans" are confused. For example, prepersonal and transpersonal, prerational and transrational, are confused because both are nonrational. They are, however, nonrational "in their own ways" (Wilber 1998: 88) and therefore awareness is either "pre" or "trans". I recognize differences between "pre" and "trans," but I would like to suggest that (in any developmental/evolutionary line)—like Yin and Yang—there may also be some "trans" in "pre" and vice versa, if not always, at least in some instances.

4. Wilber insists on a categorical distinction between stages and states: either stage or state. Stages (as basic structures) are attained in a linear sequence and, once attained, are permanent, whereas states are temporary. Since in the manifest world permanence and temporariness may be a matter of degree, I would like to suggest that we consider that stages and states may be fuzzy sets. This makes Wilber's map less clear-cut, but might render it more realistic.

5. Wilber also takes either/or logic for granted with regard to the sequence of stages. Considering whether stages follow each other either in a linear sequence or not, he concludes that they follow each other linearly. This means that stages cannot be skipped. I would like to suggest, however, that there may be jumps from lower levels, such as the magic level, to higher levels, such as transpersonal levels, which means that, for example, a shaman does not have to pass through the rational level in order to reach transpersonal levels.

    Whether levels can be skipped or not, depends on how they are defined. If they are defined in very general and rudimentary terms, they may not be skipped. But if they are defined more specifically, they may be skipped, at least at times. For example, if rationality and vision-logic are defined in very general and rudimentary terms (see, e.g., Wilber in Rothberg and Kelly 1998: 335/6), a shaman may be have rationality and vision-logic and therefore the fact that he has reached transpersonal stages does not mean that he has skipped the stages of rationality and vision-logic. If, however, rationality and vision-logic are defined more specifically in terms of logic and formal reasoning, then the shaman may have skipped these stages. Therefore, the question of whether stages can be

skipped or not appears to be largely a matter of semantics. Wilber, who insists that stages cannot be skipped, uses the definitions that support his view (see Wilber in Rothberg and Kelly 1998: 335/6). In this way, he protects his view from criticism, which is fine, but not helpful to gain further insight. One also has to consider that stages may be skipped partially, which makes "skipping stages" a fuzzy set. And finally one may have to consider that stages may be accessed simultaneously, if not totally, at least partially (see, e.g., McDonald-Smith in Rothberg and Kelly 1998). In the interesting volume edited by Rothberg and Kelly (1998), several authors (especially Washburn, Kelly, Rothberg, McDonald-Smith, Kremer, and Puhakka) drew attention to these and related problems of Wilber's holarchical stage model (see also Smith 2002).

6. Wilber also makes a categorical distinction between individuals and collectives. Following Whitehead, he insists that individuals have a dominant monad, whereas collectives don't. A dominant monad "has an organizing or governing capacity that all of its subcomponents follow. For example, when Isaac [his dog] gets up and walks across the room, *all* of his cells, molecules, and atoms get up and go with him... *And there is not a single society or group or collective anywhere in the world that does that.* A social holon simply does not have a dominant monad" (Wilber 2006: 145). However, it is not always clear whether something is an individual or a collective, an organism or a society, because there are intermediates between the two and therefore individuals and collectives are fuzzy sets. For example, there are colonial animals such as corals that form a continuous body from which parts may break off and form a new colony. A tree is usually considered to be an individual plant, but it has also been understood as a metapopulation of individuals (individuals which in that case are the branches of the tree) (see, e.g., Sattler 1986: 65).

7. Wilber makes a categorical distinction between the four quadrants of his map. However, since individuals and collectives are fuzzy sets, the limits between the individual and collective (the upper and the lower) quadrants become also fuzzy. And even the boundaries of the interior and exterior (left and right) quadrants become fuzzy when a tree can be considered an individual with its own interiority or a collective of individuals, each of which has its own interiority yet facing all the other individuals of the tree as exterior to its own interiority.

In conclusion, I want to emphasize that I am not completely against either/or thinking. It can be useful to some extent. However, if we take either/or thinking for

granted and use only either/or thinking in situations such as the above, we rob ourselves of alternatives that enrich and balance our views of the Kosmos and ourselves.

Ways of Thinking Healing the Human Condition and the World

As I have indicated already, ways of thinking are not only of intellectual and academic interest, but have also profound consequences for our personal existence, our relationships, society, and the whole planet. Either/or thinking and hierarchical thinking, although useful to some extent, divide and can easily become antagonistic and belligerent. Both/and logic, fuzzy logic, Yin-Yang and network thinking connect and therefore aid in reconciliation and healing. Hence, the recognition of these alternative kinds of logic and thinking is extremely important for a betterment of the human condition and the environmental situation—it can be healing in many ways.

Conclusions

Hierarchy in the strict sense and typical hierarchical thinking are based on either/or logic. Since either/or logic is only of limited applicability, Wilber's map and the hierarchy on which it is based also apply to reality only to a limited extent. **If we want to obtain a richer and more comprehensive map of the Kosmos, we have to go beyond either/or logic and embrace also alternative ways of thinking such as both/and logic, continuum logic (that is, fuzzy logic), Yin-Yang and network thinking. The latter connects everything and thus provides many bridges that have been obscured or forgotten due to the fragmenting nature of thought and language in terms of ideas, ideologies, religions, and beliefs.**

Either/or logic divides and its practitioners can easily become antagonistic and even belligerent. Both/and logic, fuzzy logic, Yin-Yang and network thinking connect and therefore aid in reconciliation and healing at a personal, social, and global level. Hence, the recognition of these alternative kinds of logic and thinking is extremely important for a betterment of the human condition and the environmental situation. (I am presently working on a new book tentatively entitled *Healing Thinking and Being* that will elaborate on this topic.)