

# 16. Practice and Performance

1. Semiotic agents
2. Enactions
3. Ethos and consciousness
4. Decisions and decisions
5. Pragmatism
6. The practice of inquiry
7. Continuous practice

## Semiotic agents

If *information* is made of *differences*, its genesis begins with the carving up of the One Presence (the *uncarved block* of Lao Tzu, the *phaneron* of Peirce). The primary cognitive act is to *make a distinction* (Maturana and Varela 1992, 40), and thus entities appear in the universe, which grows more intricate as more things are specified in relation to one another. Likewise each multicellular organism develops by articulation from a single cell, and myriad species evolve from the simplest forms of life. As bodymind grows, so does the complexity of interaction with other subjects and systems.

Back in Chapter 3 we quoted Maturana and Varela saying that ‘the being and doing of an autopoietic unity are inseparable.’ Their choice of the Greek root *poie-* is doubly fitting because this same verb which means ‘making’ or ‘creating’ can also mean ‘doing.’ For instance, in the core Gospel statements of the ‘golden rule,’ the English ‘do’ translates forms of Greek *poie-*:

καὶ καθὼς θέλετε ἵνα ποιῶσιν ὑμῖν οἱ ἄνθρωποι,  
**ΠΟΙΕΪΤΕ** αὐτοῖς ὁμοίως.

And as you wish that people would **do** to you, **do** so to them.

Luke 6:31

πάντα οὖν ὅσα ἐὰν θέλητε ἵνα ποιῶσιν ὑμῖν οἱ  
ἄνθρωποι, οὕτως καὶ ὑμεῖς ποιεῖτε αὐτοῖς· οὗτος γὰρ  
ἐστὶν ὁ νόμος καὶ οἱ προφῆται.

So whatever you wish that people would **do** to you, **do**  
so to them; for this is the law and the prophets.

Matthew 7:12

τί δέ με καλεῖτε, κύριε κύριε, καὶ οὐ ποιεῖτε ἃ λέγω;  
Why do you always call me Master, Master, and do not  
**do** what I say?

— Luke 6:46, Matthew 7:21

An *autopoietic unity* is also a *semiotic agent*. Semiosis is a continuous process from which we abstract the triadic relation *sign-object-interpretant*. Thus, treating each of the three *relata* as an object of our attention, we say that the sign is determined by its dynamic object to determine an interpretant, which is typically another sign determined by the first sign to represent the same object that the first represents. But in order to be a sign in its turn – in order to *mean* anything – it must determine another interpretant, ‘and so on *ad infinitum*,’ as Peirce often said. According to this semiotic analysis, a semiotic process cannot actually *complete itself*, but it can direct itself toward an ideal *limit*, as the process of inquiry does. Peirce wrote in 1904 that ‘the “Truth”, the fact that is not abstracted but complete, is the ultimate interpretant of every sign’ (EP2:304) – which it approaches ‘by being joined with other signs.’ Yet the *ultimate logical interpretant* is not itself a sign (EP2:419). What is it then? As we saw in Chapter 7, ‘the only mental effect that can be so produced and that is not a sign but is of a general application is a habit-change; meaning by a habit-change a modification of a person’s tendencies toward action, resulting from previous experiences or from previous exertions of his will or acts, or from a complexus of both kinds of cause’ (CP 5.476) – the ‘complexus’ that we map as *the meaning cycle*.

Ultimately, then, all meaningful signs are Turning Signs. This is the upshot of Peircean *pragmatism*, which (crudely expressed) is the doctrine that the real meaning of any concept consists of its conceivable implications for future conduct. It takes language, or

some kind of symbolic system, to *conceive* of the implications of future conduct; but the principle, in its most general form, applies to any *semiotic agent*, any living system capable of engaging in semiosis intentionally, and thus of forming and reforming its own habits by means of the meaning cycle – whether or not it pays conscious attention to semiosis, habits or its own intentions.

Since any system's habits guide its conduct, real increases or growth of information must have some effect on the habits which define the system's relations to the more inclusive systems which constitute its context. Information then is a systemic relation between external reality and internal habits, and any increase of information is a step toward completion of that coupling, which (like the *whole Truth*) is an ideal never actually attained. To quote Gregory Bateson again, life is 'a game whose purpose is to discover the rules, which rules are always changing and always undiscoverable' (Bateson 1972, 19-20). For living systems, which are *autonomous agents* (Kauffman 2001) to some extent, this game must be a living relationship, an ongoing process.

Just as we can speak of a 'sign' as if it were a thing, we can speak of 'information' as something that can be stored, retrieved or conveyed. But it *really counts* as living information (in the Peircean sense) only to the extent that it *can* make a real difference in the way we conduct ourselves as anticipatory systems embedded in systems.

Knowledge which should have no possible bearing upon any future experience – bring no expectation whatever – would be information concerning a dream. But in truth no such thing can be presumed of any knowledge. We expect that in time it will produce, or reinforce, or weaken some definite expectation.

Peirce (CP 5.542, c. 1902)

The network of 'definite expectations' develops into a meaning space in which distinct concepts, represented symbolically, can be connected or recombined to form new concepts. Over the history of any given guidance system, all concepts within it evolve from a common ancestor – a primal, nameless beginning which was there (which *is here*) prior to any distinctions. All current concepts are

related to one another due to their common origin in a single developing meaning space, so that they mutually define each other, and a change in the function of one may induce functional changes in many others. Of course the further the articulation process goes, the more subtle these changes become, to the point where they make no functional difference to the semiotic agent, and thus have no pragmatic meaning.

In a given language, any useful word gets used in many different senses, in many different contexts, for many different purposes; and any given reader is more familiar with some usages than with others. A reader who develops an attachment to one particular sense of a word, and an aversion to others, is liable to misread any text which uses the word. A more careful reader of the word will allow its meaning to remain vague until the dialogic text and context afford the means of clarifying it. Otherwise we tend to get 'caught by words,' as Thich Nhat Hanh puts it (for instance 1992, 70).

Some writers, and dialog partners, seem to feel that misunderstanding can be avoided by defining key terms before using them. But a verbal definition is useful only to the extent that the terms used in the definition are already understood. Besides, it is always possible to make distinctions that are more cogent than salient – that is, they seem to clarify our thoughts at the time, but later turn out to be more trouble than they are worth. Precise definitions are more likely to appear toward the *end* of a productive dialog than at the beginning. Authentic understanding depends on recognition of the same concepts when expressed in a different idiom, and of different concepts when expressed in the same form. This requires attention to context and purpose, and often requires us to set aside the idiosyncratic connotations attached to words by our private histories of usage.

## **Enactions**

In discourse and dialogue, words are used to make distinctions, to carve up the universe of discourse into different kinds of entities. On different occasions, in different contexts, the same words make different distinctions. Take for instance the

word *practice*. Sometimes the operative distinction is between 'theory' and practice, the latter being taken as more directly related to the *actual* world. For a physician, *practicing* medicine means actually treating people, as opposed to studying or doing medical research. Similarly, the *practice* of a religion is more real and 'serious' than the mere 'profession' of faith. But for an athlete or musician – especially a *professional* one – *practice* is used to develop skills and get ready for the real event, the *performance*. And oddly enough, after all that work, we call the performance *playing* – as if games and concerts were less real and serious than the business of the workaday world. But then we also refer to Shakespeare's *plays* as his *works*. (In those works, by the way, 'practice' generally refers to some devious ploy designed to deceive or manipulate people.) The fact that we don't even notice such vagaries of usage in everyday discourse only shows that the adjustments we make for context are not made consciously. Jokes and puns often work by exploiting these oddities.

In terms of our meaning-cycle diagram, we could say that *practice* represents the top half of the cycle – making things happen in the World, while the bottom half makes sense of what happens. A practice is the actualization of a *precept*; in religion, 'practice' often refers to engagement in prescribed rituals. When we refer to a 'practicing' Catholic or Buddhist, we generally mean that the person actually carries out specific *practices* prescribed by the religion (such as meditation, chanting or going to Mass), which are supposed to exemplify, maintain or restore a sacred order of some kind. If we consider this 'order' as based on 'religious experience' – which can only be *personal* experience, even when felt as unity within the group – then the purpose of ritual is to build consensus by aligning public behavior with the internal model. Or we could consider the sacred order itself as a Model of the cosmos (including the human role in it), and 'acting it out' as a way of affirming its relation to the real order of nature. If the ritual is intended to *cause* nature to conform to some order, or to make something happen just by symbolizing it, then we call it *magical*; if a procedure is intended to physically manipulate nature to serve our purposes, we call it *technological*, or just *practical*.

The equivalent performance in science is the *experiment*, which *tests* the formal model (the hypothesis) by setting up

conditions to make empirical observations which can then be systematically compared with the prediction deduced from the hypothesis. Science and religion alike aim to build consensus, but they differ in their purposes and methods of consensus-building. In religion one uses precepts to guide one's practice, and the results are evaluated (if at all) mostly by testing behavior against the *preceptual* standard, the communal ethic. In science one uses predictions inferred from theory to frame experiments, and evaluates the results by testing the theory against a *perceptual* standard of 'objectivity' (recall Chapter 12) to which observations must conform. Professional or religious practice is to everyday living as scientific practice is to critical common sense. Genuine religious practice aims to integrate the individual life with an authorized social consensus, while genuine scientific practice aims to build a social consensus by isolating observation from any one observer's idiosyncrasies, thus allowing Nature (rather than any authority figure) to take the lead role in the actual dialog. Of course, these are *ideals* of practice, to which actual practices do not always measure up, either in science or religion.

*Observation* – derived from the Latin *observare*, which has the root meaning of paying attention to something – is an essential practice in science, which as a systematic and public process exemplifies the semiotic cycle which we all inhabit. But the *observance* of moral or religious precepts, which is essential to community life, is a different kind of practice. This is another case of polyversity: the one verb 'observe' can refer to the deliberate practice of perception, to the statement of what has been perceived, or to the practice of a *precept*. According to OED, the earliest meaning of the verb *observe* is 'to attend to in practice.' Religion tends to focus on this practical side of the meaning cycle, where we *observe* the precepts (rules, laws) which guide our actions. Scientific observation, when we do it methodically (as we do in an *observatory*), works more on the perceptual or *theoretical* side. But in a complete guidance system, practical *observance* is functionally coupled with *observation*. While *theory* aims to clarify the real relations among subjects, working toward the 'perfect Truth,' *practice* aims to optimize those relations for present purposes. Both contribute to the self-control embodied in our habit-systems.

A habit is a typical behavior pattern which develops in connection with a typical situation; it governs future behavior in that kind of situation by determining the type of action likely to occur whenever the situation arises. Thus a habit is *a form developing over time* toward an ideal fit of behavior to situation – an ideal never completely realized because the situation is always changing. But beyond that, actions are always *changing the situation*. Uttering a text can make a difference in its context, a difference determined by the actual interpretation of the text.

A *informed* system is better able to predict the consequences of its own behavior than a less well-informed system. The predictability of those consequences depends on the system's knowledge of the world beyond its immediate awareness but within its sphere of interaction. Yet we change the World by describing it, because every description (every Model) plays a mediating role in the guidance system which determines how we interact with the World.

The Buddhist term for a system, and more specifically for a guidance system such as Buddhism itself, is *dharma*. When a *buddha* 'turns the dharma wheel,' *buddha* teaches *dharma* and *dharma* teaches *buddha*. Here is Eihei Dogen's advice on 'the key to studying the way':

When you first enter the gate to study the buddha way, listen to the teacher's instruction and practice as instructed. When you do that there is something you should know: Dharma turns you, and you turn dharma. When you turn dharma, you are leading and dharma is following. On the other hand when dharma turns you, dharma is leading and you are following.

— (Tanahashi 1985, 40)

*Practice* in this sense is engagement in the *meaning cycle* – which, from the point of view of any sentient being, is engagement with the external World. But the breadth and depth of this engagement, its mindfulness, depends on *cognition*. 'Cognition is behavior or conduct in relation to meaning and norms that the system itself enacts or brings forth on the basis of its autonomy' (Thompson 2007, 126). There is no cognition without *intent*, as

Peirce recognized by pointing out ‘the whole indebtedness of our cognitive to our conative functions’ (EP2:458), i.e. to our *doing*, or rather our *willing* to do something. Conative functions are to *will* as cognitive functions are to *knowledge*. Cognition can only develop in a context of conduct. As Evan Thompson put it,

*Sense-making = enaction.* Sense-making is viable conduct. Such conduct is oriented toward and subject to the environment’s significance and valence. Significance and valence do not preexist ‘out there,’ but are enacted, brought forth, and constituted by living beings. Living entails sense-making, which equals enaction.

— Thompson (2007, 158)

A belief which really guides our actions (whether we profess it or not) is a kind of habit. To change our beliefs about the world in which we live is to change our habits. The great work of this or any time is to *recreate our inhabitation* of the time, to transform it from *occupation* or *exploitation* of a place into something more like *communion* with it.

## **Ethos and consciousness**

According to Heraclitus (DK 119), the guiding spirit (*daimon*) for humans is *ethos*: ἦθος ἀνθρώπων δαίμων. *Ethos* is ‘character,’ one’s habitual way of behaving, of ‘conduct’ (Peirce) or *comportement* (Merleau-Ponty 1942). *Daimon* originally meant a god or divine power, or a ‘link between gods and men’ with a strong influence over human conduct. For Socrates, in Plato’s dialogues, the *daimon* was an inner voice, which sometimes warned him against carrying out his own intentions. In New Testament Greek, it became an evil spirit (‘demon’) who sometimes ‘possessed’ a person. But for Heraclitus, the real *daimonic* power was personality itself, in the form of *ethos*.

All animals have habits or behavioral patterns, and the science of *ethology* is the study of these. The *ethos* of every species is an internal guidance system, but humans have taken ‘self-control’ to a

new level 'by the indefinite replication of self-control upon self-control,' as Peirce put it (CP 5.402 Fn 3, 1906). Peirce also pointed out that 'self-control of any kind is purely *inhibitory*' (EP2:233): that is, it *prevents* the acting out of impulses that would cause behavior contrary to the guiding *ethos*, while allowing actions compatible with it. Guidance and control are embodied in *legisigns*; by talking about our own ethical systems – by making these legisigns the *objects* of other symbolic signs – we have taken more *conscious* control of them. Thus we harness the semiotic cycle to turn the guidance systems that turn us.

Biologically, guidance systems have evolved as nervous systems embodied in organisms who relate to their Umwelts as individuals.

The biological logic behind the formation of nervous systems in nature is to delegate increasing amounts of power away from the level of the *species* and to the level of the *individual*. Genetic adaptations take generations to construct, whereas the brain can effectively wire itself up in the lifetime of the single individual. In the large scheme of things, the appearance of species with brains corresponds to a concretization or individualizing of the semiotic *subjecthood* that in more primitive species unconditionally resides at the level of the species. With the creation of more and more sophisticated brains, the *individual* increasingly takes power over its own actions and becomes an autonomous semiotic agent in its own right.

— Hoffmeyer (2008, 165)

For an autonomous semiotic agent, 'there is no perception that is ever separated from a possible, functional, motor implementation' (Llinás 2001, 169). Action-perception is a single semiotic cycle. 'Behavior is, as it were, dialogical and expresses meaning-constitution' (Thompson 2007, 71). In terms of energetics, the nervous system economizes by using small amounts of metabolic energy to inform and control behavior that consumes much larger amounts. The Greek root of *metabolism* itself signifies

an 'exchange'; in the biological context, one form of energy is exchanged for another by chemical means. This internal transformation powers the semiotic cycle which in turn enables the organism to interact with the external world which is (by definition) beyond its immediate control. The semiotic agent can do this only because of its double interface with the world, and has control of this interaction to the extent that perception and action are connected in real time through the medium of *ethos*. Reasoning gives the agent conscious control of this *ethos*, and critical logic in turn enables conscious control of reasoning. But each level of self-control is powered by the spontaneous activity of bodymind, which it guides by selectively inhibiting some of its expressions.

As we have already heard from Peirce (in Chapter 10):

The elements of every concept enter into logical thought at the gate of perception and make their exit at the gate of purposive action; and whatever cannot show its passports at both those two gates is to be arrested as unauthorized by reason.

— Peirce (EP2:241)

Thus the perception-action circuit is closed by reasoning, which inhibits ('arrests') some elements of Thought in order to channel semiotic or 'logical energy' from percept, through precept, into controlled practice; and thus 'it is in action that logical energy returns to the uncontrolled and uncriticizable parts of the mind' (Peirce, EP2:241). This 'logical energy' authorizes a here-and-now action which is the *energetic interpretant* of the current thought-sign (EP2:409-10). But if the sign has a *logical* interpretant, or what we usually call a *meaning*, it must be *general*, as a habit, precept or law must be in order to *guide* behavior into the indefinite future. At the same time, the energetic interpretant actualizes the logical interpretant by specifying its application in the current context: the path is made by walking it.

## Decisions and dicisigns

The meaning of a precept is the practice of it; but what makes a

*practice* meaningful?

A *practice* is a routine, a habit manifesting itself in action. It could not be recognized as *a* practice – that is, abstracted from the stream of behavior – if it did not have a perceptible pattern which must be repeated in order to be effectively performed. Perception of patterns, and the recycling and *crossing* of habits, are greatly enhanced by human-style consciousness, which allows us to experiment with habits symbolically *before* acting them out. But in order to appreciate the special qualities of consciousness, we need to see how it differs from other aspects of the guidance system, even within humans. The structure of the visual system affords a remarkable example of this difference.

‘Conscious visual experience presents the world to a subject in a form appropriate for the reason-and-memory based selection of actions’ (Clark 2002, 197). But to carry out selected actions in real-time situations, the brain requires another component of visual experience which is *not* conscious. Some organisms, including humans and other primates, have developed two ‘streams’ of visual functioning, identifiable in the brain as ‘dorsal’ and ‘ventral’ streams. The former enables motor coordination with things around us and allows us to respond to changes of situation faster than consciousness would allow. The latter is filtered through categorization, planning and meaning systems involving memory, thus allowing us to deal with situations not immediately present, and extending the scope of ‘real time’ for organisms thus equipped.

There is wealth of evidence, of various sorts, for this separation of function in human and some animal brains. I will just mention some of the most fascinating here. There can be a dissociation between the function of locating an object in the space around you and the function of deciding what it is. Some patients, suffering from what is known paradoxically as ‘blindsight,’ cannot tell an experimenter whether a postbox slot in front of them is horizontal, vertical, or diagonal, or even whether the thing in front of them is a postbox; but they can hold an envelope at exactly the right angle to post it in the slot whose angle they cannot, with one visual subsystem, see. For such patients, the dorsal

stream is intact, but the ventral stream has suffered an injury.... Conversely, Goodale et al.'s patient RV could discriminate one object from another, but was unable to use visual information to grasp odd-shaped objects accurately (Goodale et al. 1994); RV's dorsal stream was impaired.

— Hurford 2007, 100-101

Hurford presents evidence of a close correspondence between this infrastructure of the brain systems and the subject/predicate structure of propositions in logic. As Stjernfelt (2014) shows, a Peircean analysis of that structure shows it to be deeper and older (in evolutionary terms) than language. A proposition is a symbolic *dicisign*, and a *dicisign* is a 'double sign' in its relation to its interpretant (EP2:275). This doubleness, like the cooperation between ventral and dorsal streams in organizing visual experience, makes the sign sufficiently complete to guide actual body-object relations while enabling *recognition* of the object as belonging to a general type. Language and other symbolic systems build on this basic structure by enabling the mind to deal with objects which are *not* present in 'real time,' i.e. with possibilities and probabilities as well as actualities.

One common use of the word 'conscious' implies that being conscious of a purpose means being able to produce a verbal formulation of it. That ability is a *sign* of consciousness, but not the only sign. A more basic sign is the ability to choose among various courses of action. As Llinás (2001, 168) remarks, 'consciousness has the great ability to *focus*—that is why consciousness is necessary. It is necessary because it underlies our ability to *choose*' (168). But our choices would be meaningless if the bodymind as a whole could not put them into practice by directing our actions as well as our attention.

The advantage of consciousness is that it enables post-conscious habits to be better than pre-conscious habits. But since your habits work most effectively when you are unaware of them, the optimal guidance system uses consciousness to minimize the need for conscious control. To *learn* a habit or skill means to practice it until we can delegate its performance to unconscious processing, thus freeing up consciousness to deal with novel

realities. Pragmatically, then, the best reason for making an *ethos* explicit – for explicating or explaining ethical principles – is to improve its implicit functioning. As long as rules or precepts are *consciously* observed, they have not yet become habits, and thus their integration into genuine practice remains incomplete.

Conscious communication between learners also has the power to form or reform the semiotic habits of the communicants. In conversation, signs may take on new roles in the play of meaning, or sink further into familiar roles. Any *dicisign* (i.e. any sign that can be true or false), to the extent that it *communicates* successfully, also changes the signification of its terms, so that the next time the term is used, it may mean something different in the next interpretant. The *commens* has been altered by that utterance, and so has the *pragmatic* context (from the Greek πράγμα, a deed or act; plural πράγματα, circumstances, affairs, business).

As John Deely observes, ‘the being of signs is realized and maintains itself only in acts of relating’ (Deely 2007, 117). Requoting Gregory Bateson from the previous chapter: ‘Message material, or information, comes out of a context into a context.’ When you are informed, the context into which that information comes is your *ethos* or habit-system – and that system is *changed* by the advent of that information. Any *semiotic agent* capable of relating in turn to its environment by uttering informational signs will thereby modify their external context as well.

As far back and ahead as we can imagine, the bodymind is still turning, turning and returning. What is this semiotic process, that you should be mindful of it? You are already intimate with it, and consciousness is no substitute for that intimacy; but when your habits get too hidebound, it can help you change them. Likewise logic, as conscious attention to the soundness of a reasoning process, can help you change your practice of thinking.

## Pragmatism

In 1887, Charles S. Peirce designed a correspondence course on ‘the Art of Reasoning,’ hoping to improve on the way the subject was being taught in the colleges. Part of his appeal to prospective students went like this:

Logic as it has been taught is trifling... But the new logic taught by Mr. Peirce is eminently practical; and the great thing is not to allow the pupil to fall into trifling subtleties,—and to teach him to unite scientific profundity and even a philosophical insight with thoroughly practical aims. The practical must never be lost sight of, or the reasoning becomes dry and worthless.

(W6:30)

Semiotic habits are entangled with practical habits; communication is a practice affecting other practices. Indeed, a sign has no meaning if it has no conceivable effect on subsequent *pragmata*. This is the core idea of *pragmatism*, which was first popularized by William James, although it had been formulated decades earlier by Peirce.

The term is derived from the same Greek word *pragma*, meaning action, from which our words ‘practice’ and ‘practical’ come. It was first introduced into philosophy by Mr. Charles Peirce in 1878. In an article entitled ‘How to Make Our Ideas Clear,’ in the ‘Popular Science Monthly’ for January of that year Mr. Peirce, after pointing out that our beliefs are really rules for action, said that, to develop a thought’s meaning, we need only determine what conduct it is fitted to produce: that conduct is for us its sole significance. And the tangible fact at the root of all our thought-distinctions, however subtle, is that there is no one of them so fine as to consist in anything but a possible difference of practice.

— James (1907, 506-7)

Philosophical pragmatism is essentially a *theory of meaning*. In other contexts, the word ‘pragmatic’ is used in very different ways. A “pragmatic” politician, for example, is one who is willing to do whatever is expedient or necessary for whatever purpose he considers ‘practical’ (whether the practice is *ethical* or not). As a philosophical practice, though, pragmatism is necessarily

concerned with *ethos*, and especially with the *ethos* of philosophy itself. Peirce had this to say about the purpose of pragmatism:

What is it expected to accomplish? It is expected to bring to an end those prolonged disputes of philosophers which no observations of facts could settle, and yet in which each side claims to prove that the other side is in the wrong. Pragmatism maintains that in those cases the disputants must be at cross-purposes. They either attach different meanings to words, or else one side or the other (or both) uses a word without any definite meaning. What is wanted, therefore, is a method for ascertaining the real meaning of any concept, doctrine, proposition, word, or other sign. The object of a sign is one thing; its meaning is another. Its object is the thing or occasion, however indefinite, to which it is to be applied. Its meaning is the idea which it attaches to that object, whether by way of mere supposition, or as a command, or as an assertion.

CP 5.6 (c. 1905)

When Peirce gave his Harvard Lectures on the topic in 1903, 'making a difference in practice' was for him (as for James, above) the essential element of his definition, which he stated in the form of a precept or 'maxim':

... the maxim of pragmatism is that a conception can have no logical effect or import differing from that of a second conception except so far as, taken in connection with other conceptions and intentions, it might conceivably modify our practical conduct differently from that second conception.

EP2:234

Now, a concept's 'connection with other conceptions and intentions' may not be easy to elucidate. How does one assess – for example – whether a new attempt at 'explaining consciousness' is an original discovery, or an original usage of the term 'consciousness,' placing it in a shifted relationship to the other

terms connected with it in meaning space? In other words, how can you use words to disentangle word from concept, or thought from language? Pragmatism aims to cut through these tangles by asserting that a 'difference' which doesn't make a difference *in practice* is not really a difference at all.

There can *be* no difference anywhere that doesn't *make* a difference elsewhere—no difference in abstract truth that doesn't express itself in a difference in concrete fact and in conduct consequent upon that fact, imposed on somebody, somehow, somewhere and sometime. The whole function of philosophy ought to be to find out what definite difference it will make to you and me, at definite instants of our life, if this world-formula or that world-formula be the true one.

— James (1907, 508)

To *believe* a proposition is to *habitually* act as if the fact it represents is an element of the *actual* universe. Your belief, then, is a proposition which you take to be *true* and are therefore prepared to act upon, whether you formulate it verbally or not. Your disposition to act in that way is the pragmatic meaning of the proposition.

In the context of the meaning cycle, pragmatism tells us that *the meaning of a precept is the practice of it*. There is no *pragmatic* difference between a 'world-formula' and a comprehensive 'model' (i.e. one that structures all of meaning space). These terms are labels, and pragmatism exposes the futility of disputes about labels. That is one difference it makes – and, given the ease with which people fall into disputes over labels, that alone makes the concept and practice of pragmatism worthwhile.

In his original 1878 article, 'How to Make Our Ideas Clear,' Peirce had stated the 'maxim' of pragmatism this way:

Consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object.

15 years later, in preparing a logic text to be called *How to Reason*,

Peirce commented on this as follows:

Before we undertake to apply this rule, let us reflect a little upon what it implies. It has been said to be a sceptical and materialistic principle. But it is only an application of the sole principle of logic which was recommended by Jesus; "Ye may know them by their fruits," and it is very intimately allied with the ideas of the gospel. We must certainly guard ourselves against understanding this rule in too individualistic a sense. To say that man accomplishes nothing but that to which his endeavors are directed would be a cruel condemnation of the great bulk of mankind, who never have leisure to labor for anything but the necessities of life for themselves and their families. But, without directly striving for it, far less comprehending it, they perform all that civilization requires, and bring forth another generation to advance history another step. Their fruit is, therefore, collective; it is the achievement of the whole people. What is it, then, that the whole people is about, what is this civilization that is the outcome of history, but is never completed? We cannot expect to attain a complete conception of it; but we can see that it is a gradual process, that it involves a realization of ideas in man's consciousness and in his works, and that it takes place by virtue of man's capacity for learning, and by experience continually pouring upon him ideas he has not yet acquired. We may say that it is the process whereby man, with all his miserable littlenesses, becomes gradually more and more imbued with the Spirit of God, in which Nature and History are rife....

When we come to study the great principle of continuity and see how all is fluid and every point directly partakes the being of every other, it will appear that individualism and falsity are one and the same. Meantime, we know that man is not whole as long as he is single, that he is essentially a possible member of society. Especially, one man's experience is

nothing, if it stands alone. If he sees what others cannot, we call it hallucination. It is not “my” experience, but “our” experience that has to be thought of; and this “us” has indefinite possibilities.

Neither must we understand the practical in any low and sordid sense. Individual action is a means and not our end. Individual pleasure is not our end; we are all putting our shoulders to the wheel for an end that none of us can catch more than a glimpse at — that which the generations are working out. But we can see that the development of embodied ideas is what it will consist in.

CP 5.402n

To some this may seem unduly optimistic about our chances of progress toward this end on this planet. But the early 21st Century, the time of this writing, is a time of transition to more conservative (sustainable) uses of available energy; and ‘it is important for present morale, during transition, to believe that the mission of information progress of our era can continue far into the future, albeit more slowly’ (Odum 2007, 392-3). If we don’t believe this, we are unlikely to make it so.

## The practice of inquiry

In 1905, after the word “pragmatism” had gained wide currency in the popular press, Peirce

proposed that the word “pragmatism” should hereafter be used somewhat loosely to signify affiliation with Schiller, James, Dewey, Royce, and the rest of us, while the particular doctrine which I invented the word to denote ... should be called “*pragmaticism*.” The extra syllable will indicate the narrower meaning.

CP 8.205

Whole books have been written about the difference between “pragmatism” and “pragmaticism,” but for our purposes here, everything that Peirce wrote about the latter applies as well to the

looser and broader concept. In 1906, for instance, Peirce placed it in an even larger context than he had earlier:

Pragmatism makes thinking to consist in the living inferential metaboly of symbols whose purport lies in conditional general resolutions to act. As for the ultimate purpose of thought, which must be the purpose of everything, it is beyond human comprehension; but according to the stage of approach which my thought has made to it ... it is by the indefinite replication of self-control upon self-control that the *vir* is begotten, and by action, through thought, he grows an esthetic ideal, not for the behoof of his own poor noddle merely, but as the share which God permits him to have in the work of creation.

(The Latin word *vir* in this context may be taken as equivalent to 'our real manhood, our spiritual reality': 'In general, God is perpetually creating us, that is developing our real manhood, our spiritual reality. Like a good teacher, He is engaged in detaching us from a False dependence upon Him' (CP 6.507, 1906).)

This ideal, by modifying the rules of self-control, modifies action, and so experience too — both the man's own and that of others, and this centrifugal movement thus rebounds in a new centripetal movement, and so on; and the whole is a bit of what has been going on, we may presume, for a time in comparison with which the sum of the geological ages is as the surface of an electron in comparison with that of a planet.

— Peirce, CP 5.402 Fn 3 (1906)

Given such a difference in time scale between 'the purpose of everything' and the *ethos* of our own (transitional) era, what is the use of theories about the nature of things that appear to have no currently practical applications? The pure scientist is not at all concerned with that kind of usefulness, but only with the advancement of our knowledge toward the Whole Truth. The scientific mind, like that of the young child, is driven by curiosity;

and as Kant observed, 'no curiosity is more disadvantageous to the expansion of our knowledge than that which would always know its utility in advance, before one has entered into the investigations, and before one could have the least concept of this utility even if it were placed before one's eyes' (*Critique of Pure Reason*, B296-7). Hadamard, in his study of creative thinking in mathematics, put it even more strongly:

Practical application is found by not looking for it, and one can say that the whole progress of civilization rests on that principle.

Hadamard 1945, 124

One might argue that he meant 'practical application is not found by looking for it,' but the examples he gives (such as the geometric investigation of the ellipse by the early Greeks, which made the discoveries of Kepler and Newton possible many centuries later) are of purely theoretical inquiries which would have been short-circuited by concerns of practicality, but which *later* found very important applications. In his Cambridge lectures of 1898, Peirce described scientific inquiry as a spiritual quest guided by 'the light of nature' – while also contrasting it with 'Practice':

The only end of science, as such, is to learn the lesson that the universe has to teach it. In induction it simply surrenders itself to the force of facts. But it finds, at once,—I am partially inverting the historical order, in order to state the process in its logical order,—it finds I say that this is not enough. It is driven in desperation to call upon its inward sympathy with nature, its instinct for aid, just as we find Galileo at the dawn of modern science making his appeal to *il lume naturale*. But in so far as it does this, the solid ground of fact fails it. It feels from that moment that its position is only provisional. It must then find confirmations or else shift its footing. Even if it does find confirmations, they are only partial. It still is not standing upon the bedrock of fact. It is walking upon a bog, and can only say, this ground seems to hold for the present. Here I

will stay till it begins to give way. Moreover, in all its progress, science vaguely feels that it is only learning a lesson. The value of *facts to it*, lies only in this, that they belong to Nature; and Nature is something great, and beautiful, and sacred, and eternal, and real,—the object of its worship and its aspiration. It therein takes an entirely different attitude toward facts from that which Practice takes.

EP2 54-5

What Peirce called 'Practice' (and sometimes 'Art') in this context includes what we now call 'engineering,' 'technology' and 'applied science' – tools and techniques useful toward some preconceived end. Practicing these 'arts' requires a reliable theory of how things work, a grounding in knowledge that will not 'begin to give way' in the foreseeable future.

And so, says Practice, I can safely presume that so it will be with the great bulk of the cases in which I shall go upon the theory; especially as they will closely resemble those which have been well tried. In other words there is now reason to believe in the theory, for belief is the willingness to risk a great deal upon a proposition. But this belief is no concern of science which has nothing at stake on any temporal venture but is in pursuit of eternal verities (not semblances to truth) and looks upon this pursuit, not as the work of one man's life, but as that of generation after generation, indefinitely.

EP2:55-6

Science as genuine inquiry requires a Will to Learn, and 'the first thing that the Will to Learn supposes is a dissatisfaction with one's present state of opinion' (EP2:47); and this dissatisfaction arises not from general principles but from observation. 'Every inquiry whatsoever takes its rise in the observation, in one or another of the three Universes [of Firstness, Secondness and Thirdness, introduced in Chapter 5], of some surprising phenomenon, some experience which either disappoints an expectation, or breaks in upon some habit of expectation' (EP2:441). The *observation* which

leads to inquiry is very different from the measurements made by the engineer in order to carry out his practical project, and even more different from the *observance* of moral or religious precepts.

In the light of pragmatism, a scientific theory is itself a set of precepts, to be evaluated by the meta-ethos of the scientific method, the systematic self-control of inquiry. The logical definition of the subject to be investigated is also a *precept*, according to Peirce. For example he says that the logical definition of the element *lithium* is the chemical procedure for obtaining a sample of it. He remarks that 'this precept ... tells you what the word lithium denotes by prescribing what you are to *do* in order to gain a perceptual acquaintance with the object of the word' (EP2:286). *Observance* of such precepts creates the context of scientific *observation*. But unlike the *observance* of the religious practitioner (or engineer), genuine scientific practice is always ready to drop or modify its 'beliefs' when the observed facts call them into question. Indeed the phenomena which are most interesting to a scientist are precisely those which present *challenges* to the cognitive bubble of beliefs.

Observation of a *surprising* phenomenon is often the starting point of scientific inquiry. The next step is to frame a *hypothesis* which would *explain* the phenomenon by integrating the observed facts with the established model, and thus would inform or reform that model. A good hypothesis is one worth testing because it generates expectations different from those which would follow from previously established beliefs. The next step is a series of experiments testing by actual observation whether these new and surprising expectations are borne out. The scientist records these observations so the resulting data can be made public and the experiment replicated. In English, the act of *mentioning* that we have observed something, or of expressing an opinion based on observation, can also be called *observing*. Meanwhile our attention to the patterns we observe, both in the world and in our own behavior, has an effect on our unconscious habits – which sometimes rise to consciousness as precepts to be observed, or as theories, completing another turn of the semiotic cycle.

Science is a communal enterprise, but one that fosters debate and dissension instead of discouraging it, since it aims at propositions whose truth is independent of anyone's belief in

them. According to Thomas Kuhn, the major debates that lead to scientific revolutions are about paradigms.

When paradigms enter, as they must, into a debate about paradigm choice, their role is necessarily circular. ... The resulting circularity does not, of course, make the argument wrong or even ineffectual. The man who premises a paradigm when arguing in its defense can nonetheless provide a clear exhibit of what scientific practice will be like for those who adopt the new view of nature.

— Kuhn (1969, 94)

Within any community that uses language, pivotal points of disagreement often reflect not differences of model but different choices concerning which aspects of it to explicate and which to leave implicit. Differences may also arise from variant namings of niches in the communal meaning space or *commens*. Such differences can only be resolved by the practice of dialogue – or by the dialog of scientific practice, i.e. by inquiry as a conversation with nature.

## Continuous practice

Due to the simplicity of our minds, we tend to think of theoretical models or received truths as Eternal Verities. We are encouraged to think of religious beliefs that way, as transcendental certainties. But the semiotic cycle shows these timeless perfections to be illusions – ‘flowers in the sky,’ as Zen masters used to call them. Only unrealized ideals, such as The Whole Truth, can reasonably be regarded as “eternal verities.” Practice is part of the meaning cycle, and *practice takes time*. Practice is *living* the time. To be a whole person is to interpret the whole of your experience, through your continuing practice, as a living symbol playing its (perhaps infinitesimal) part in the continuing Scripture of the Universe.

Reading literature while ignoring the way of practice is like a person reading a prescription but forgetting to

take the medicine; what is the benefit?

— Dogen (Okumura and Leighton 1997, 26)

Practice is *intentional* and therefore has a direction; it points toward the future like the arrow of time itself. Time is continuous, as far as we can tell – meaning (according to Peirce) that every moment of time, no matter how short or long, has parts of the same nature as itself. To say that time is continuous is the same as to say that *change* is continuous, which is essentially the Buddhist doctrine of *impermanence*. But the other side of this coin is that Buddhist *enlightenment* is neither a ‘state’ to be attained nor a sudden break in awareness. According to Dogen, practice is *immediately* enlightenment. ‘Indeed, the continuous practice of one person will merge with the way-place of all buddhas’ (Dogen, EU 153).

A buddha’s practice is to practice in the same manner as the entire earth and all beings. If it is not practice with all beings, it is not a buddha’s practice. This being so, from the moment of arousing the aspiration for enlightenment to the moment of attaining enlightenment, all buddhas realize and practice the way together with the entire earth and all beings.

—Dogen, SBGZ ‘Yuibutsu yobutsu’ (Tanahashi 2010, 880-1)

‘As one practices,’ Dogen writes, ‘one must not anticipate realization apart from practice in that practice points directly to original realization.’ Dogen also maintains the ‘unceasing circulation of continuous practice’ (*gyōji-dōkan*), such that ‘the Way [of buddhas and patriarchs] is circulating ceaselessly without even the slightest gap between resolution, practice, enlightenment, and *nirvāna*.’

— Heine 1994, 72 (citing ‘Bendōwa’ and ‘Gyōji’)

The image of ‘unceasing circulation’ is not limited to Buddhism; we also find it in Kabbalah, though expressed in very different terms. ‘The essence of the Kabbalistic idea of God ... lies in its resolutely dynamic conception of the Godhead: God’s creative power and vitality develop in an unending movement of His

nature, which flows not only outward into Creation but also back into itself' (Scholem 1976, 158). In Kabbalistic practice the 'recitation' of *Torah* as *performance* of Scripture embodies the divine dynamism. The emphasis on practice is even stronger in Zen Buddhist scriptures such as the *Platform Sutra*:

This Dharma must be practiced; it has nothing to do with recitations. If you recite it and do not practice it, it will be like an illusion or a phantom. The Dharma body of the practicer is the equivalent of the Buddha.

— Hui-neng (Yampolsky 1967, 146)

Religious institutions are in constant danger of turning genuine practice into a set of rituals, routines, piously followed habits. The problem with such 'pious practices' is that the element of ritual can become a substitute for, or even a hindrance to, spiritual transformation. The *Gospel of Thomas* warns about this danger, with particular reference to fasting and prayer, in Sayings 6 and 14 (as we saw in Chapter 6). The point is made a third time in Saying 104:

They said to [Jesus]: 'Come, let us pray and fast today!'  
Jesus said: 'What sin is it that I have committed, or wherein have I been overcome? But when the bridegroom comes out of the wedding chamber, then let (us) fast and pray.'

— (5G)

As the bridegroom in the wedding chamber is a frequent symbol of the mystical union, the bridegroom coming out of that chamber may signify a lapse into duality, and thus (like sin) an occasion for 'atonement' practices such as prayer and fasting. (In the synoptic parallels, the 'bridegroom' is Jesus, and the point is that the disciples should not waste the limited time of his presence by observing outworn or inappropriate practices. DeConick (2007a, 281) thinks that the original context was a legalistic dispute over whether it was proper to fast on someone's wedding day, but taking this as the primary reference would severely limit the relevance of the saying, even for those hearing it three or four generations after Jesus, let alone two millennia later.)

Here the groom's presence *within* the wedding chamber seems to symbolize the 'continuous practice' of the true seeker, or the spiritual consummation of embodiment, just as the sexual union does in Kabbalah. From this perspective, ritual performances are inferior substitutes for authentic practice. Saying 53 says much the same about another traditional religious practice:

His disciples said to him: 'Is circumcision beneficial, or not?'

He said to them, 'If it were beneficial, their father would beget them circumcised from their mother. But the true circumcision in the spirit has prevailed over everything.'

— (5G)

Spiritual transformation requires religious precepts to function implicitly as guidelines for your *whole* life (which is continuous with the whole of Life, and thus not merely *yours*). If we need another term to distinguish this kind of continuous practice from institutionalized performances, we could perhaps use *praxis*. *Praxis* then is lived experience – all of it! – in its enactive aspect. Religious practices are specialized forms of *praxis* which serve to define the religion and build consensus within it, which in turn may guide (or misguide) the everyday lives of its adherents in the larger world beyond sectarian boundaries.

And where does *faith* fit into this picture? It has little to do with the intellectual belief which amounts to assenting to the truth of some verbal formula, but it may have a lot to do with trusting the path you are walking. 'If you practice with genuine trust, you will attain the way, regardless of being sharp or dull' (Dogen, Tanahashi 2004, 32). The material witness to your faith or belief is your full-time behavior. *Praxis* uses belief to organize itself. Any given practice can authorize a variety of beliefs, and any given belief can organize a variety of practices: another case of polyversity. In this sense we can say that belief *informs* practice, and practices *inform* praxis.

The *praxis* promoted by *Thomas* is not ritualistic, but neither is it 'ordinary,' as it seems that only one in a thousand can live up to it. Radical religious movements are often *ascetic* in this sense.

Richard Valantasis points out that the Greek root *askesis* refers primarily to 'the preparations that athletes performed in order to be capable of rigorous athletic competition.' As a spiritual discipline, it includes 'all the actions ... required to build a new identity' (Valantasis 1997, 22). One engages in such *practices* in order to reform or transform one's *praxis*, one's meaningful actions in relation to the world or to other subjects. One such practice is the *zazen* or 'just sitting' taught by Dogen and the others in his Zen lineage. This discipline of bodymind is taught and monitored by an experienced guide to enable the practitioner to realize her buddha-nature and live from it fully. This is a *practice* whose business is becoming a full-time *praxis*. 'Continuous practice is the circle of the way,' says Dogen (Tanahashi 2000, 114).

In regard to freely penetrating the great way that completes birth and masters death, there is an ancient statement, "A great sage surrenders birth and death to the mind, surrenders birth and death to the body, surrenders birth and death to the way, surrenders birth and death to birth and death." As this teaching is actualized without limitation in the past and present, the awesome presence of active buddhas is thoroughly practiced immediately.

The teaching of birth and death, body and mind, is the circle of the way and is actualized at once. Thoroughly practicing, thoroughly clarifying, it is not forced. It is just like recognizing the shadow of deluded thought and turning the light to shine within. The clarity of clarity beyond clarity prevails in the activity of buddhas. This is totally surrendering to practice.

To understand the meaning of totally surrendering, you should thoroughly investigate mind. In the steadfastness of thorough investigation, all phenomena are the unadorned clarity of mind. You know and understand that the three realms of desire, form, and formlessness are merely elaborate divisions of mind. Although your knowing and understanding are part of all phenomena, you actualize the home village of the self. This is no other than your everyday

activity.

This being so, the continuous effort to grasp the point in phrases and to seek eloquence beyond words is to take hold beyond taking hold, and to let go beyond letting go.

— Dogen, 'Gyobutsu Igi': Tanahashi 2010, 268-9