Foundation for a Person-Centred, Humanistic Psychology—and Beyond: The Nature and Logic of Carl Rogers' "Formative Tendency"

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> *Jacob set out from Beersheba and went on his way to Harran. He came to a certain place and stopped there for the night, because the sun had set; and, taking one of the stones there, he made it a pillow for his head and lay down to sleep. He dreamt he saw a ladder, which rested on the ground with its top reaching to heaven, and angels of God were going up and down on it.*
> (Genesis, 28: 11-12)

What will it take to generate a bona fide science of psychology?

The view I hold is that such a science will only come about through the construction of a unitary pattern of ideas—a "paradigm," to use Thomas Kuhn's term; a "metanarrative" to employ postmodernist discourse—whereby we will be able to integrate into a seamless web the empirical findings and theoretical contributions of contemporary psychology's smorgasbord of rival and competing conceptual approaches. "What we need for a science of mind," as Susanne Langer (1967) has written, "is not so much a definitive concept of mind, as a conceptual frame in which to lodge our observations of mental phenomena" (p. 17).

Postmodernists, with their renowned "incredulity towards metanarratives" (Lyotard, 1984, p. xxiv), would undoubtedly view any attempt to forge such a frame as a pointless exercise. Postmodernist pessimism notwithstanding, my aim in the present paper is to point the way towards the fabrication of a framework of ideas capable of serving as the foundation block for a genuine science of psychology. The specific task I take on is that of characterizing the nature and logic of a concept that I believe to be capable of serving as the central pivot around which such an ideational scheme can be constructed.

My rationale for adopting such a strategy derives from analysis of paradigmatic schemes in well established sciences. What we find at the core of these ideational vehicles are one or two highly abstract concepts which are not only defined in a rigorous and precise manner, but which possess great power in applying to a wide range of events. On Langer's (1962) testimony, "Newton's concept of gravity as a property of matter was such a concept; so was the concept of evolution which Darwin's *Origin of Species* sprang upon the world" (p. 13). It is concepts like these, says Langer, that facilitate "the reconception of facts under a new abstractive principle, in a new intellectual projection". "The sciences are really born," she avers, "when their key concepts reach a degree of abstraction and precision which makes them adequate to the demands of exact, powerful, and microscopically analytic thinking".

What then is the concept around which a unitary ideational frame for a science of psychology can be constructed?

It is none other, I propose, than that concept that Carl Rogers (1980) hypothesized "could be a base upon which we could begin to build a theory for humanistic psychology"; the concept which "definitely forms a base for the person-centered approach"; that concept which he himself formulated and named the "formative tendency" (p. 133).

Broad as Rogers' own claims are, however, what I am claiming is broader still. I am not just claiming that Rogers' notion of the formative tendency "forms a base for the person-centered approach"; not just that it "could be a base upon which we could begin to build a theory for humanistic psychology"; but that it constitutes a base upon which we can build a theory for psychology as a whole, i.e. a genuine scientific paradigm. In brief, that Rogers' concept of the formative tendency possesses the potential to serve as the central concept for an ideational scheme by which psychology can become a bona fide science, a science which is not just humanistic and person-centred, but which embraces the entire range of theoretical approaches within the discipline—viz., the neuro-biological, the behavioural, cognitive-developmental, cognitive-behavioural, psychoanalytic, and transpersonal.

For the paradigmatic potential of the formative tendency to be so realized, it is necessary, as I see things, to go beyond Rogers in terms of the rigour and precision that he himself employed in defining this crucial concept, both with respect to its general nature and to its intrinsic logic. I base the present attempt to generate an enhanced definition of the formative tendency upon the premise that person-centred theory as a whole (inclusive of the formative tendency) is a particular expression of an emerging scientific paradigm, one that has been variously labelled holistic, organismic, and process ("HOP," for short, cf. Capra, 1996)—other expressions of this paradigm being field theory, general systems theory, and eco-psychology. It is this HOP paradigm, as Fritjof Capra attests (Capra, 1982), that is currently in the process of supplanting its predecessor: the mechanistic paradigm grounded upon the views of Descartes and Newton. Person-centred theory, in general, and the concept of the formative tendency, in particular, I argue, can be further elaborated and refined through harmonic synthesis with the formulations of thinkers who though outside the fold of the person-centred approach, nevertheless espouse the common HOP worldview upon which it is based (see Ellingham, 2001).

Such then is the operational premise that lies behind the present paper. In it I make use of ideas formulated by a number of HOP thinkers in pursuit of my aim of defining the formative tendency with greater rigour and precision. Thinkers whose ideas I draw upon in this way are Arthur Koestler, Susanne Langer, Michael Polanyi, Alfred North Whitehead, and last, but most importantly, Lancelot Whyte. For not only was Rogers profoundly indebted to Whyte in his formulation of the formative tendency, but other aspects of Whyte's thought provide us with the means of augmenting Rogers' formulation, both in their own right and through indicating conceptual links with the other thinkers mentioned.

To begin with, given that my intention is to set Rogers' concept of the formative tendency on a par with such scientific concepts as Newton's concept of gravity and

Darwin's concept of evolution, I look to shed light upon the nature of scientific concepts per se. I base my exposition almost exclusively upon that of Susanne Langer, as set within her discussion of the notion of "logical form" and the nature of logic.

Logic and scientific concepts

According to Whitehead (1938/1968), it was logician Henry Sheffer who "emphasized the notion of pattern, as fundamental to logic" (p. 52). For Sheffer, and for Susanne Langer, Sheffer's and Whitehead's student, logic as an intellectual pursuit thus represents "a science of pure forms," "a science of order," where "anything may be said to have form that follows a pattern of any sort, exhibits order, internal connection" (Langer, 1953a, pp. 40, 24). "Form" as the logician defines it, i.e. "logical form" is therefore manifested in a wide range of different mediums, or "contents," and doesn't just refer to the commonplace notion of physical shape.

Just how wide ranging the notion of logical form is, relates Langer (1953a), is indicated by the many synonyms we employ to refer to "form" in this very general sense. "We speak," she highlights, "of physical, grammatical, social forms; of psychological types; norms of conduct, of beauty, of intelligence; fashions in clothing, speech, behaviour; new designs of automobiles or motor boats; architectural plans, or the plans for a festival; pattern, standard, mode and many other words [here we might add Gestalt, whole, paradigm, configuration, scheme, structure, system, template] all signify essentially the same thing in specialized usage or subtle variations of meaning" (p. 24).

Such synonyms give us some inkling of the way in which "the content of a logical form may be psychical, musical, temporal, or in some other way non-physical, just as well as physical" (p. 42). Not only, then, does logical form have relevance for the realm of the spiritual, for instance, but to "contents" that are dynamic as well as static. It thus becomes clear how Langer can claim that "logic applies to everything in the world" (p. 41), and how Whitehead is able to prophesy that "Symbolic Logic, that is to say the symbolic examination of pattern with the use of real variables, will become the foundation of aesthetics," from whence, he asserts, "it will proceed to conquer ethics and theology" (Whitehead, quoted in Mays, 1959, p. 98).

As to the relevance of the notion of logical form to science and scientific understanding, the generation of scientific concepts like Newton's concept of gravity or Darwin's concept of evolution is based, says Langer, upon our ability to apprehend the same form or pattern in diverse contents—that is, on our ability to discern relationships of analogy between different phenomena. So, for example, "the swing of a pendulum, the swaying of a skyscraper, the vibration of a violin string over which the bow is passing....the shaking of Grandpa's palsied hands...the quiver of a tuning fork...the vibration of a parked automobile with the engine running" are all identified as exhibiting the common pattern (i.e. logical form) of "rhythmic motion to and fro" (Langer, 1953a, pp. 35 & 36).

Now it may be, as Langer suggests, that different people generate individually different "mental pictures" of the pattern in question. However,

> when we consider the common form of various things or various events, and call it by a name that does not suggest any particular thing or event, or commit ourselves to any mental picture—for instance, when we consider this common form of various movements, and call it by a name such as "oscillation"—we are consciously, deliberately abstracting the form from all things which have it. Such an abstracted form is called a concept. From our concrete experiences we form the concept of oscillation. (Langer, 1953a, p. 36)

What facilitates such conjuring of concepts is the employment of easily manipulated representational devices (whether pictorial image, verbal proposition or mathematical formula), devices that themselves manifest and express the abstract form in question. Such devices are what we call symbols, "formal analogy, or congruence," being "the prime requisite for the relation between a symbol and whatever it is to mean" (Langer, 1953b, p. 27).

"The fact," Langer elucidates, "that so many things in nature exemplify the same forms makes it possible for us to collect our enormously variegated experiences of nature under relatively few concepts" (p. 36), and, we might add, represent them symbolically. "If this were not the case," she goes on to explain,

> we could have no science. If there were not fundamental concepts such as oscillation, gravitation, radiation, etc., exemplified in nature over and over again, we could have no formulae of physics and discover no laws of nature. Scientists proceed by abstracting more and more fundamental forms (often seeing similarities among the abstracted forms, or concepts, themselves and thus gathering several concepts into one); and by finding more and more things that fall under certain concepts, i.e. that exhibit certain general forms. (1953a, p. 36)

In his concept of gravity, Newton symbolized in mathematical terms a common order or pattern to events on earth and in the heavens. Verbally expressed and pictorially represented, Darwin's concept of evolution identified a common order or pattern that governs and unites all living things. Rogers' formative tendency, as we shall see, is of metaphysical proportions (see O'Hara, 1999, p. 64), claiming to identify a single order or pattern to every level of the universe; to be, that is, a conceptual stitch uniting all aspects of the universe in a seamless whole.

It is to consideration of Rogers' formulation of this all-embracing concept that I now turn, particularly to the matter of its close connection with the views of Lancelot Whyte.

Congruence between Rogers and Whyte: the formative, morphic overlap

Rogers officially unveiled his concept of the formative tendency in a short paper delivered in 1975, but not published until 1978 (see Rogers, 1978). Five years later, Rogers presented a more elaborate characterization of the same concept set within an extended version of this earlier paper (see Rogers, 1980). As Rogers defines the formative tendency there is a clear concordance between his ideas and views of

Lancelot Whyte set out in Whyte's 1974 book The Universe of Experience. This concordance is hardly surprising, given that Rogers acknowledges that his formulation of the formative tendency owes "a special indebtedness" to this work of Whyte, and also explicitly equates Whyte's concept of a "morphic tendency" with his own "formative tendency"—an equation reinforced by Whyte's actual deployment of the term "formative tendency" as a synonym for "morphic tendency" (Whyte, 1974, p. 58).

Let us look, then, at the equivalent manner in which the two authors' define their respective concepts. Consider first how each states his fundamental thesis.

"My main thesis," declares Rogers, "is this: there appears to be a formative tendency in the universe, which can be observed at every level" (1978, pp. 23-4; 1980, p. 124). "I hypothesize," he amplifies,

> that there is a formative directional tendency in the universe, which can be traced and observed in stellar space, in crystals, in micro-organisms, in more complex organic life, and in human beings. This is an evolutionary tendency toward greater order, greater complexity, greater interrelatedness. In humankind, this tendency exhibits itself as the individual moves from a single-cell origin to complex organic functioning, to knowing and sensing below the level of consciousness, to conscious awareness of the organism and the external world, to a transcendent awareness of the harmony and unity of the cosmic system, including humankind. (1980, p. 133)

By comparison, Whyte (1974) states his fundamental "world view" in the following manner: "There is present on many levels in nature a tendency toward, order, form, and symmetry; hence in living systems toward organic coordination; and in man [sic] toward personal coordination" (p. 20).

A second point of equivalence has to do with the two authors' descriptions of the workings of the formative tendency in living systems. In this context, both consider the formative/morphic tendency to be responsible not only for creation but for preservation, for maintaining new forms as well as spawning them. In Rogers' case, such discussion occurs with reference to that "part of" the formative tendency that he terms "the actualizing tendency," the part "in living systems" (Rogers, 1980, p. 134). The actualizing/formative tendency is therefore for Rogers "a tendency toward fulfillment, toward actualization, involving not only maintenance but also the enhancement of the organism" (p. 123).

Similarly, it is in the context of a discussion of the nature of living organisms that Whyte (1974) refers to a "vital surplus" being associated with the morphic tendency (p. 82). "The presence of this vital surplus," contends Whyte, "implies that the total processes in organisms are not merely life-preserving, but life-enhancing, not merely adaptive but formative and sometimes creative" (p. 83).

A third equivalency between Rogers and Whyte, one of primary importance for our present discussion, is that both authors identify the same logical pattern as exemplary of the workings of the formative tendency. For his part, Rogers (1980) speaks of the "evolutionary tendency toward greater order, greater complexity, greater interrelatedness" exhibiting a pattern wherein "every form that we see or know

emerged from a simpler, less complex form" (pp. 125, 133). While in a similar vein, Whyte (1974) asserts that "every finite thing that man [sic] can observe ipso facto has form, and was, we find that we must assume, formed sometime from something less formed, and the term "morphic" is no more than a convenient term to cover all these particular cases and countless others" (p. 44). Such an assertion is not something entirely new, according to Whyte, since "the principle that well-formed terminal states can arise from less-formed initial ones has long been recognized" (p. 43).

Following this brief examination of the close equivalence between Rogers' and Whyte's formulations apropos the formative tendency, I move on now to highlight and further develop features of Whyte's (1974) thought that are neglected by Rogers. This further development entails both pointing up connections with, and making use of, ideas formulated by yet other HOP thinkers.

The further development of features of Whyte's thought neglected by Rogers

There are, in my view, at least three important aspects of Whyte's thought that are neglected by Rogers. The first concerns the hierarchical structure of the universe that is expressive of the workings of the formative tendency; the second, the presence of qualitatively different morphic processes at each level of this hierarchical structure; the third, the notion that the qualitatively different levels of morphic processes give rise to qualitatively different modes of consciousness.

(1) A hierarchical structure to reality

To my mind, the most prominent feature of Whyte's thought that is neglected by Rogers is the ramification that when the formative tendency is defined as an ubiquitous tendency that, on the one hand, works to maintain existing forms and, on the other, creates new forms more complex than their predecessor, then of necessity the universe as a whole, and all aspects of it, will exhibit a hierarchical structure, a hierarchical logic.

"The universal morphic process," declares Whyte (1974), "generates the coordinating tendency of organisms and the order-seeking tendency in the human mind and in all of these the morphic tendency operates on levels forming a hierarchy" (p. 61).

Whyte is very clear, therefore, that intrinsic to the "world view" he is positing is the presumption that "the known universe as a whole, and every organism, including man [sic], contains a graded sequence of units in each of which a formative tendency has been, or still is, present" (p. 58). It is a scheme of things, attests Whyte, in which

> the universe is arranged in a series of discrete "levels," which for precision we call a hierarchy of wholes and parts. The first fact about the universe is its organization as a system of systems from larger to smaller, and so also is every individual organism. (p. 43)

Whyte links such a conception with that of Arthur Koestler, who, Whyte recounts, "has introduced the useful term holon for any unit which (a) contains parts, and (b) is

also a part of a larger unit, that is for all units in hierarchies, excluding any largest and smallest units' (pp. 135-6).

Given that Whyte identifies a connection between his thought and that of Koestler, I find it surprising that Whyte does not go on to point up what for me in this context is an even more important concordance: that between his (Whyte's) ideas and those of Michael Polanyi, another organismic thinker—my surprise derives from Whyte's definite familiarity with Polanyi's ideas (see Whyte, 1974, p. 88). For, with regard to such a hierarchical perspective on reality, what carries special significance for me is Polanyi's delineation of "the structure of tacit knowing" (Polanyi, 1968, p. 88), a hierarchical structure brought about when a complex form emerges from a less complex forebear—i.e. due to the operation of the formative tendency, or "orderly innovating tendency," as Polanyi terms it (1964, p. 386). Thus, whereas Whyte refers in a general fashion to "nature and mind showing us their common form" (1974, p. 61), it is Polanyi, through his characterization of the abstract form of the structure of tacit knowing, who spells out more explicitly the character and logic of the common form intrinsic to all "levels" of reality, to the creative activity of the ubiquitous formative tendency.

Consider, then, Polanyi's explication of this abstract or logical form intrinsic to the workings of the formative tendency.

To make his meaning plain, Polanyi employs an example from human visual perception. Building upon the Gestalt psychologists' principle that the whole is greater than the sum of the parts, Polanyi invites us to

> think of a pair of stereoscopic photographs, viewed in the proper way, one eye looking at one, the other eye looking at the other. The objects shown in the two pictures appear in their joint image as distributed in depth, and tangible. This is what we see at the focus of our eyes; but it involves the sight of the two component pictures: cover these up and we see nothing at all. But we do not see these two pictures in themselves. In a way, we look through them or from them, at their joint image. So I shall class our awareness of them as subsidiary and observe that the way we look at them integrates their sights into a spacially deepened image to which they contribute. Thanks to our integration, the two flat pictures effectively function as clues to a spacial image. (Polanyi, 1968, p. 86)

What Polanyi presents us with here is an example of a more complex form (the "spacially deepened image") being created from a simpler form (that of a flat picture): an integrative, creative transformation occurring by way of a "gestalt switch" from the focal flat picture to the focal spacial image: a formative process in which what was once focal, the flat picture, becomes subsidiary to, a constituent element within, a more complex focal form. When we speak of the more complex form being on a higher level than its simpler forebear, then over time what we have are two levels of a hierarchy, a hierarchy which in the abstract can be thought of as made up of additional levels, "above" and "below". The flat pictures, for instance, can be thought of as made up of the simpler forms of straight and curved lines.

This formative process of 3D image being created by integrating the two flat pictures can be represented in the following way:

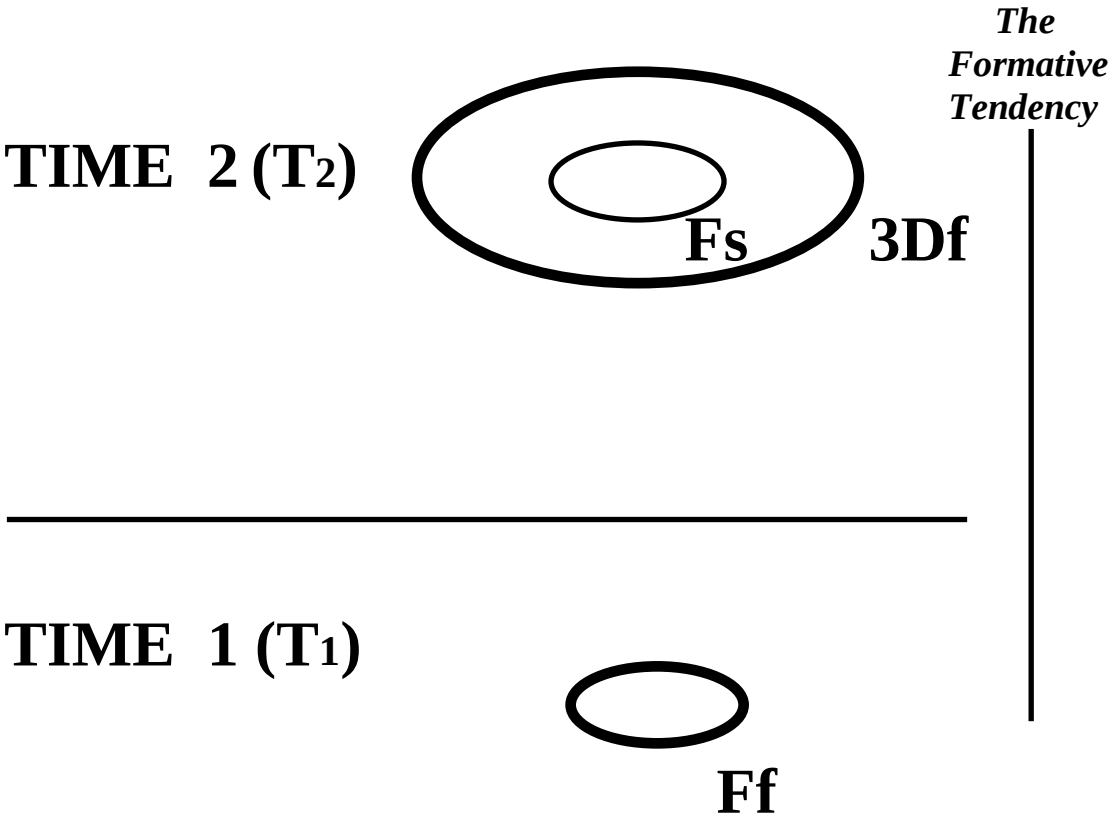

Figure 1

Figure 1 represents the working of the formative tendency from an initial time T_1 to a later time T_2, a time in which focal form Ff (of the flat picture) is creatively transformed into focal form 3Df (the spacially deep image) wherein F continues to be present in a subsidiary way as Fs. 3Df is therefore logically congruent with Ff insofar as form F is manifested by both focal forms.

In Figure 2, the structure of tacit knowing—the logical pattern expressive of the formative tendency—is represented even more abstractly and an additional level of development is imagined to have taken place.

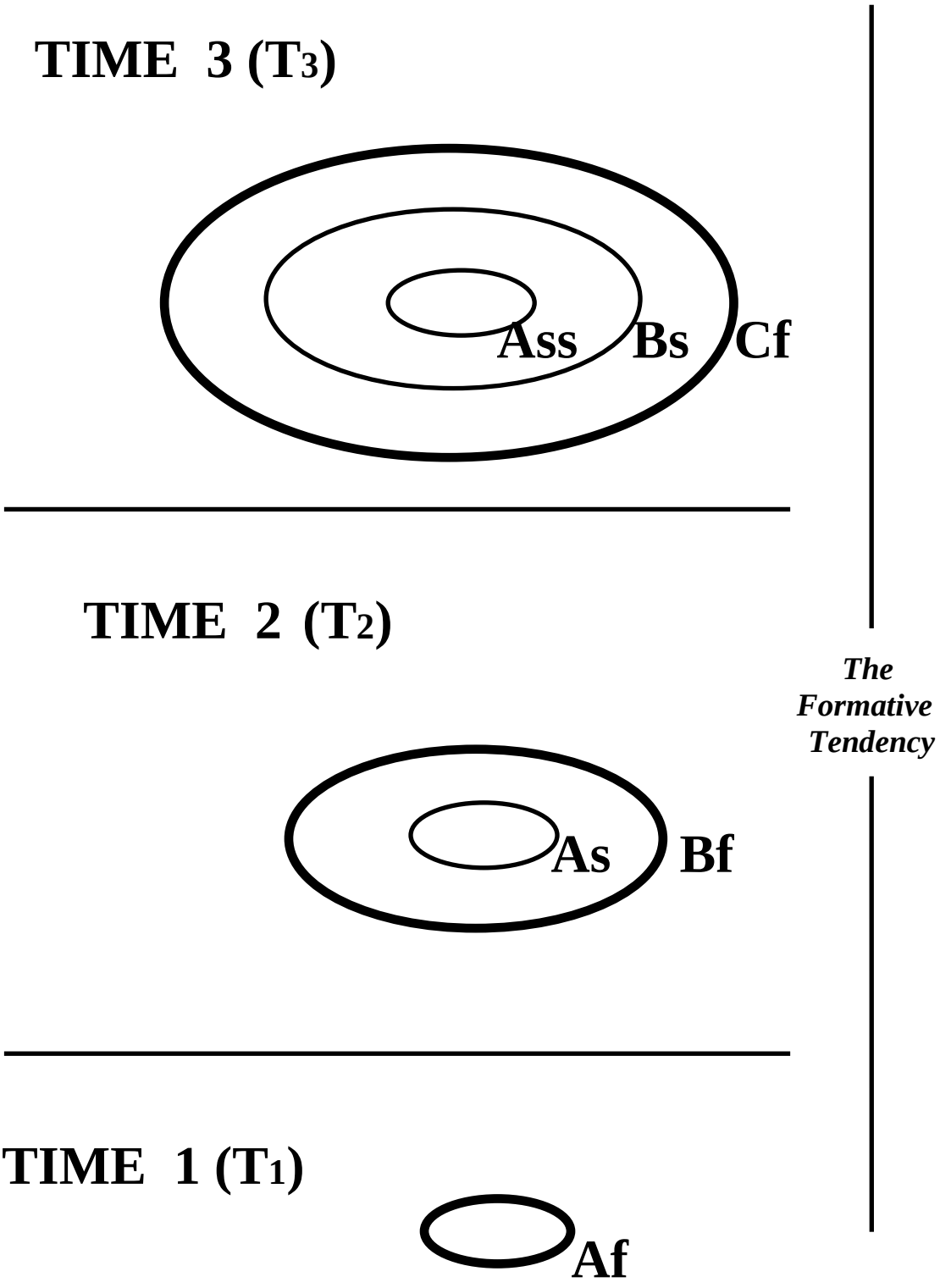
TIME 3 (T3)
Ass
Bs
Cf
TIME 2 (T2)
As
Bf
TIME 1 (T1)
Af
The Formative Tendency

Figure 2

Figure 2 is intended to represent the completely general case where two more complex forms, forms B and C, have emerged over time from an initially existing form, form A. This diagram, it may be noted, is similar to others produced by such individuals as Ken Wilbur (1995, p. 115) and Rupert Sheldrake (1988, p. 95), and accords with the notion of a "nested hierarchy," a notion popular with evolutionary theorists, in general, and evolutionary psychologists, in particular. It also bears comparison with hierarchical formulations of the nature of reality developed by such proponents of general systems theory as Ludwig von Bertalanffy (see Seeman, (2002)).

Special features intrinsic to the abstract pattern depicted by figure 2 are:

- the existence of a congruent relationship between levels defined in terms of possession of a common logical form.
- the necessary continued operation of the organizational principles of lower level forms when the lower level form has a subsidiary presence in a higher form. Or, as Polanyi puts it, "The higher level principles rely quite generally on the laws governing the lower levels" (1969, p. 218).
- a situation in which the character and nature of a higher level form cannot be predicted beforehand from the character and nature of a lower level predecessor. In other words, an act of creation is represented in which the emergence of the higher level form from a lower level form represents the formation of something new.
- the universal application of the depicted abstract pattern to all levels of existence, especially to human consciousness.

As Polanyi sees things, therefore, interpretation of the above logical template provides us "with a picture of the universe filled with strata of realities joined together meaningfully in pairs of higher and lower strata….which tend to link up into a series forming a hierarchy" (1966, p. 35), a picture in which "living beings consist in a hierarchy of levels, each level having its own structural and organismic principles" (1965, pp. 219, 218). This "stratified structure to living things," claims Polanyi, "will include the structure of consciousness in higher animals" (p. 211), a contention which accords with Whyte's view that "until we can interpret mental processes as organized in a hierarchy of levels, each marked by its function, we shall achieve no clarification of this puzzling issue: the status of consciousness in the universe," (1974, p. 35). I shall say more about the nature consciousness shortly.

Before I do so, it is also worth noting how a diagram like figure 2 can be used to represent not only the creation of new forms, but also deterioration or disintegration; and how, beyond this, one can portray the process referred to by Kazimierz Dabrowski (1964) as "positive disintegration" and by Arthur Koestler (1980) as "regress to progress', a sequence of events which Koestler sees as intrinsic to "the creation of novelty in mental evolution…[and] biological evolution" (p. 349).

Consider, therefore, the following diagram:

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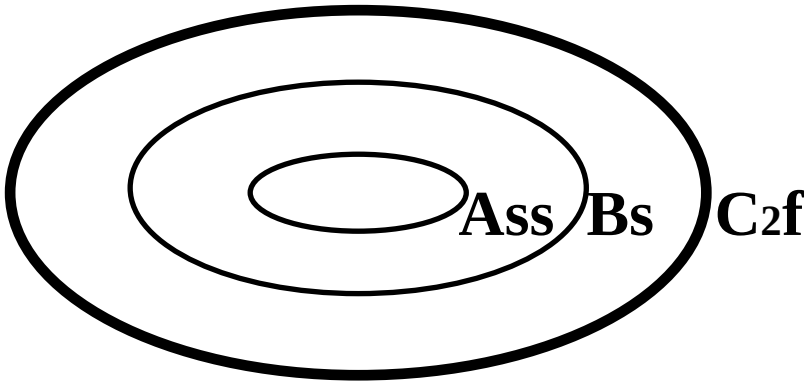
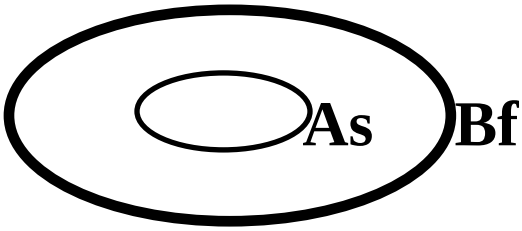
TIME 3 (T_3)



TIME 2 (T_2)

The Formative Tendency



TIME 1 (T_1)

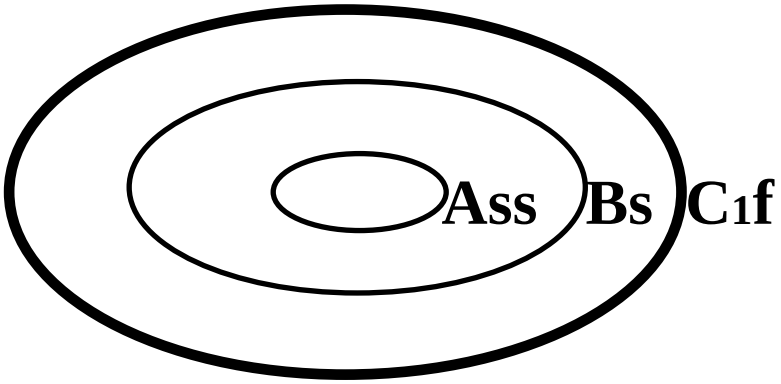


Figure 3

What figure 3 represents is first the disintegration of focal form C_1 such that (at Time 2) form B once again becomes focal while higher level form C_1 disintegrates and no longer exercises an entraining influence over form B. Thereafter, (at Time 3) form C_2 comes into being, a form which accommodates forms A and B in a more adequate and comprehensive fashion than form C_1.

In later discussion I have more to say on interpretative uses of the above diagram, particularly in relation to psychotherapy. For the moment, though, I return to consider two other features of Whyte's thought that are neglected by Rogers: the notion of qualitatively different morphic processes at each hierarchical level, and of different modalities of consciousness being associated with these individual levels.

(2) Qualitatively different patterns of process at each hierarchical level

In expounding his "world view," Whyte points up that while overall there is a common abstract form expressive of the workings of the formative tendency, at individual levels the concrete character and modality of its expression is different. In this regard, Whyte speaks of a "hierarchy of morphic….[or] formative processes," and of the importance of trying "to discover the hierarchy of morphic rules relating all levels in all relevant processes" (1974, pp. 78 & 52). Such a depiction accords with Polanyi (1965) when he refers to "each level having its own structural and organismic principles" or "organizing field" (p. 218), and with Sheldrake (1988) who speaks of "morphogenic" or "morphic fields" that "contain other morphic fields within them in a nested hierarchy or holarchy" (p. 317). Interestingly, both Polanyi and Sheldrake base their conception of such formative fields or principles on the ideas of C. H. Waddington, the evolutionary theorist who coined the term "chreod" meaning "necessary path" to characterize the formative influence of such fields or principles (see Waddington, 1977, pp. 106ff). Waddington envisaged the influence of chreods or canalized pathways as akin to grooves or valleys on snow-covered mountain slopes. The path of development is thus like the path in the snow a skier is constrained to follow in skiing down a mountain. When more and more skiers follow a particular path its groove become deeper and more strongly influences later skiers to follow that path.

As with Waddington, the morphic rules or organizing fields that are of special interest to Whyte are those governing living processes and organisms. In this instance, Whyte's formulations closely accord with the views of Langer and Whitehead, particularly where he identifies the pattern of pulsation, of "down and up motions" (1974, p. 78), as the pattern intrinsic to morphic processes at this level. In a living organism, declares Whyte, "pulsations underlie every function," leading to "endless cycles at each level" (p. 79).

In my view, therefore, it is highly significant that it is just such an interpretation that Langer presents in her magnum opus, Mind: An Essay on Human Feeling (1967, 1972 & 1982). For in this work she gives a detailed exposition of the evolution of life and mind explained on the basis of the cyclical repetition of pulsatory activity—of "acts," as she calls them. By seeing "acts" as special kinds of "events," Langer thus builds upon the views of her mentor Whitehead, who in his "process philosophy" or

"philosophy of organism" takes "events," units of patterned activity of a "vibratory" or "throbbing" nature, to be fundamental to a process conception of reality. For Whitehead, therefore, "the reality is the process," and "the event is the unit of things real," such that we best think of ourselves "as process immersed in process beyond ourselves" (19251967, pp. 72 & 152; 1938/1968, p. 8). Linking with what has just been said about morphic fields, what Whitehead refers to as "process beyond ourselves" may be equated with such fields.

Whitehead's notions, in particular, are extremely abstract and not easy to grasp, so allow me to elaborate upon them further. To maintain, as Whitehead does, that "the reality is the process" is to assert a position radically at odds with the Cartesian-Newtonian view that the world is ultimately made up of two kinds of irreducible and unchanging stuffs or substances, namely matter and mind. Factors that led Whitehead and other process theorists to turn away from the Cartesian-Newtonian towards a process paradigm include:

(iv) The impossibility of satisfactorily resolving the notorious "mind-body problem" in Cartesian-Newtonian terms. If, as in this paradigm, one defines the person as made up of matter and mind, one can only achieve a unitary conception of the person in terms of (a) matter, the approach of materialism; or (b) mind, the approach of idealism; or (c) a more abstract concept than that of substance in terms of which mind and matter and their interrelation can be conceived. In this last case, though, by ceasing to treat the substances of matter and mind as fundamental, one is in effect abandoning the bedrock notions of the Cartesian-Newtonian paradigm, and thereby the paradigm itself. When Whitehead and others take the concept of process as primary and seek to construe both matter and mind in terms of this concept, it is such a course of action that is being pursued.

(v) Thanks to Darwin, the notion that unchanging matter is the essential constituent of all aspects of reality has received a body blow in that if matter had indeed been unchanging, the evolution of all things from matter, ourselves included, could not have occurred. In addition, thanks to Einstein and other modern physicists, we now know that a more precise and fundamental way of conceiving the physical realm is in terms of patterned activity, process, set within a field of such activity, as waves are set in the sea—each individual "wave" being what Whitehead terms an "event". So construed, what we take to be physically unchanging is a relative affair since "enduring things are the outcome of a temporal process" (Whitehead, 1925/1967, p. 108). On the one hand, the repetition of the same pattern in event after event will, like the same picture on successive frames of a movie film, be apprehended as an unchanging form; on the other, if our experiencing of change were to be spread over a far greater time scale, what we presently take as unchanging, the form of a huge mountain, for instance, could be seen to exhibit a pattern of movement—akin say, to the way in which the filming of the budding and growth of a plant carried out by slow action cameras produces a film in which the process is so speeded up that we are able to perceive the pattern of change.

The insight that the developments in modern physics imply a paradigmatic re-visioning of our perspective on reality; the notion that biological organisms are more complex wholes of patterned activity that have evolved from simple wholes of patterned activity such as atoms. Such developments as these led to the generalizing of the process view to all aspects of reality, in particular to our understanding of the human being. We, too, like other enduring "things," are complex wholes of patterned activity, "organisms" like the atom and plant; each one of us "like nature…a system of processes" (Whyte, 1974,) governed by the general evolutionary principle of "the evolution of complex organisms from antecedent states of less complex organisms" (Whitehead, 1925/1967, p. 107). Such is the basis on which a process paradigm seeks to comprehend the person in a unitary fashion, to construe as a single system of processes the various aspects of the person that our ordinary language-laden sense making finds it hard to interrelate, viz., our "physical," "psychological," and "spiritual" being. Whether one is focusing upon the molecules in our bodies, the ideas in our minds, or our mystical visions, the process paradigm aims to interpret such features as expressions of particular patterns of activity—the trick being to determine the pattern behind the common sense appearance.

For his part, Rogers can be said to be very much in tune with such a process perspective. Not only did Rogers conceive "nature as process" (1963, p. 19), but he endorsed the view, relates Harry Van Belle, that the person be described "first of all as a tendency, a process, an activity or functioning rather than an entity which then does this actualising," since to see the person as an actualizing entity "would imply that he [sic] could be described as (also) being something other than this activity, as a substance that is itself to itself, regardless of how it functions" (Van Belle, 1980, p. 71). Further, in formulating the concept of the formative tendency beyond that of the actualizing tendency, Rogers would seem to have advanced beyond conceiving physical nature and "life" alone in process terms and to have moved towards conceiving all aspects of reality in such a manner, i.e. to have adopted the position of Whitehead. A proviso here, however, is that in Whitehead (unlike Rogers but in accord with Whyte) there is an explicit link between the view of reality as process and its having a hierarchical structure. Intrinsic to Whitehead's process thought is the view that reality is made up of different levels of pulsating activity of comparative complexity, such pulsations being rhythmically joined together and interrelated. Reality, that is to say, is to be thought of as made up of "gradations of rhythms" wherein "the more perfect rhythm is built upon component rhythms" and where "every great rhythm presupposes lesser rhythms without which it could not be" (Whitehead, quoted in Emmet, 1966, p. 229).

(3) Qualitatively different modalities of consciousness associated with different hierarchical levels

Mention of hierarchically gradated rhythms brings us to the third facet of Whyte's thought overlooked by Rogers: the place of consciousness and human awareness in such a multi-level scheme. It is Whyte's (1974) contention that psychology awaits "the formulation of a theory of the characteristics of subjective experience, of the qualities of human awareness" and that such a lack can be remedied "by treating the hierarchy of morphic processes as primary" (p. 67). By adopting such an approach, says Whyte, "each type of awareness can be determined by the character of a

changing pattern, as in music for example" (p. 67). In other words, just as differing patterns of pulsating activity of a guitar string give rise to different musical notes, so differing patterns of pulsating organismic activity give rise to different modalities of consciousness.

To conceptualize consciousness in this fashion is to do so in a way that is very similar to Langer and Whitehead, both of whom deploy the term "feeling" as a generic term for all aspects of consciousness, i.e. "all mental experience—sensation, emotion, imagination, recollection, and reasoning, to mention only the main categories (Langer, 1962, p. 18). In Whitehead's words, consciousness both "flickers" and is "the way of feeling…[a] particular nexus," or interconnection of events (1929/1969, pp. 312 & 305); whereas, for Langer, consciousness is said to arise when "an organism feels something, i.e. something is felt" when "some activities (especially nervous ones) above a certain limen of intensity, enter into a "psychical phase"" (1967, pp. 21 & 22). "What is felt," Langer posits, "is a process, perhaps a large complex of processes, within the organism" (p. 21). Thereby, the evolution of consciousness is to be interpreted as the evolution of feeling as a function of the evolutionary development of more and more complex patterns of process. Given, though, that the universe so evolved constitutes a hierarchy of morphic processes, it is fitting to refer, as Whitehead does, to "a hierarchy of categories of feeling" (1929/1969, p. 192); or to speak, as Whyte himself, of "a hierarchy of mental processes" (1974, p. 106).

Langer herself in her magnum opus Mind: An Essay on Human Feeling, Vols. 1, 2 & 3 provides a detailed exposition of the evolutionary development of non-organic, organic and cultural events (i.e. units of process) that has resulted in the emergence of the human organism. In tandem with this exposition she provides a masterful account of the development of consciousness, particular in its realization in animals and early humans. Overall Langer is concerned to depict such development as a differentiation from modes of awareness of a vague, global and emotively charged character to those that are highly differentiated and specific and less emotively charged. In so doing she links her theorizing with that of Ernst Cassirer, in particular his account of mythic consciousness, that mode of human awareness that preceded that of modern reasoning.

The conception of human awareness of Langer, Whitehead and Whyte is not necessarily at odds with the views of Rogers or person-centred thought in general. Rogers himself, for instance, drew upon the image of a fountain to represent the character of human awareness in the context of evolution. In so doing he depicted it as both a feature of the processes that comprise the human organism, and most particularly of those processes operative at the highest organismic level at any moment in time. As he put it,

> the ability to focus attention seems to be one of the latest evolutionary developments in our species. This ability can be described as a tiny peak of awareness, of symbolizing capacity, topping a vast pyramid of nonconscious organismic functioning. Perhaps a better analogy, more indicative of the continual change going on, is to think of the pyramid as a large fountain of the same shape. The very tip of the fountain is intermittently illuminated with the flickering light of consciousness, but the constant flow of life goes on in the

> darkness as well, in nonconscious as well as conscious ways. (Rogers, 1980, p. 127)

Related, too, is Rogers' early depiction of the workings of the actualising/formative tendency "in the direction of greater differentiation of organs and of function" (Rogers, 1951, p. 488). But in lacking a more specific account of the nature of such development, Rogers' presents an essentially two-level or dualistic model as he focuses on the psychotherapeutic transition from "gut level" experiencing, or an "unverbalized visceral flow," to symbolized or verbalized, accurately labelled awareness (Rogers, 1980, p.158). In this respect, Rogers' theorizing is very much linked with that of Eugene Gendlin and Gendlin's portrayal of psychotherapy involving an implicit "bodily felt sense" being symbolized or "carried forward" from the "edge of awareness" to explicit awareness (Gendlin, 1996).

As we have seen, though, Rogers does envisage a further level in the development of consciousness in characterizing "a transcendent awareness of the harmony and unity of the cosmic system, including humankind" (Rogers, 1980, p. 133). But whether such awareness is indeed a further development from ordinary language-laden consciousness is a moot point.

Overall, then, the hierarchical conception of human consciousness developed from Whyte, Langer and Whitehead is at odds with Rogers' views in (a) characterizing two or more levels/modalities of consciousness prior to the development of our everyday awareness; (b) identifying an analogous relationship between these levels and our evolutionary past, the premise being that of Polanyi: that "we can see at a glance all the levels of evolution at a glance in the human being" (1966, p. 36).

Rogers might better have followed Whyte more closely in his use of the metaphor of the fountain, for it seems he borrowed this image from an earlier work of Whyte, The Next Development in Man (1948). In this work Whyte does more than make a comparison with a single fountain. Rather he states than "an organic system is like a fountain balanced upon a pyramid of fountains" (Whyte, 1948, p. 49). Instead of the tip of just one fountain being "intermittently illuminated" what is envisaged is the illumination of the tips of these other fountains also. These, too, can generate focal awareness.

Interpretations

What I have presented so far has been of a quite abstract nature. To support my overall thesis that the formative tendency can serve as the conceptual linchpin for a paradigm of psychology, I round off by focusing on more concrete issues: first, on how the preceding characterization of the formative tendency might be deployed to integrate the major non-humanistic approaches within psychology: second, on how light can be shed on that mental phenomenon of crucial interest to advocates of the person-centred approach, the phenomenon of psychotherapeutic change. Summarizing the premises on which such interpretations will be based, these are:

(i) that the human being is a complex whole made up of increasingly complex levels of functional activity/process, an "organism" that is part of the "supra-organism" of the universe as a whole.
(ii) that the hierarchical scheme depicted above represents the logical relationship which exists between the different levels in the human being.
(iii) that the increasing complexity of the levels of functional activity intrinsic to the human being is itself a function of an evolutionary history in which higher level "morphic" fields and their inherent organizational principles have successively "jump[ed] into being" (Sheldrake, 1988, p. 173). Each person is thus a living epitaph of this evolutionary process insofar as "we can see all the levels of evolution at a glance in the human being."
(iv) that consciousness arises as a function of the intensity of activity at the various levels, with human consciousness arising in relation to the upper levels.
(v) that the development of consciousness involves differentiation from a global, vague and emotively charged form to a more specifically delineated and less emotively charged form.
(vi) that where the various theoretical approaches within psychology differ is in terms of their primary interest lying with different levels of the functional activity constitutive of the human being.

1. Integration of theoretical approaches

(iv) The neuro-biological approach

In terms of the above premises, the neuro-biological approach is construed as principally concerned to study those processes intrinsic to the human being that are of an early evolutionary pedigree, those exhibited by the brain and nervous system especially. Processes are fundamental and anatomical structure comes into being as a kind of "sedimentation" of past processes, thereby assuming an organizational form that accommodates and consolidates the ongoing multi-level activity characteristic of the respective morphic fields. In Whyte's words, "the presence of structure furthers the repetition of the process by which it was formed" with the result that "every structure provides evidence of the form of the process by which it was formed" (1948, p. 33). Such a conception fits with that of Paul MacLean (1973) who identifies a three-level "phylogenetic hierarchy" to the "anatomical organization and chemistry" of the human brain. It accords, too, with Sheldrake's assertion that

> the morphic fields that organize behaviour are not confined to the brain, or even to the body, but extend beyond it into the environment, linking body to the surroundings in which it acts. They co-ordinate sensation and action, bridge the sensory and motor regions of the brain, and co-ordinate a nested hierarchy of morphic fields, right down to those that organize the activity of particular nerve and muscle cells. (1988, p. 198)

One may also see a link here with Eugene Gendlin's conception of "the body," "a term Gendlin uses comprehensively to mean the total brain-mind environment as we sense it" (Ferguson, 1980, p. ix).

(v) The behaviourist approach

In employing the present hierarchical scheme as an interpretative frame for the contributions of behaviourists, what needs to be borne in mind, in my view, is how many of these contributions are based on research with non-human animals. Langer's account of animal mentality, of animal behaviour being governed by immediate feeling, thus springs to mind as an extremely fruitful way of interpreting behaviourist contributions in hierarchical process terms. Here one relevant connection vis-à-vis person-centred theory is Langer's characterization of "subception" (discrimination without awareness in humans) as a subsidiary form of a mode of awareness that in animals is focal in nature (Langer, 1972, p. 116). The relevance of this connection lies in Rogers' (1959) use of the notion of subception to provide a theoretical explanation of individuals finding situations anxiety arousing without knowing what it is that is making them anxious.

(iii) The cognitive-developmental approach

Apropos the cognitive-developmental approach in psychology, an immediate affinity of thought can be discerned between the present hierarchical scheme of things and the theorizing of Jean Piaget—certainly with respect to the logic intrinsic to Piaget's developmental scheme of higher level cognitive operations being built upon and emerging from lower level ones. And where the cognitive operations of scientific thought are concerned, the highest level on Piaget's cognitive hierarchy, the ability of the human mind to intuit a common pattern to the world of events and particular number schemes can be interpreted in relation to the hierarchical logic of the formative tendency, a logic capable of being represented by, for instance, the ordinal number series, of first, second, third, etc.

(iv) The cognitive-behavioural approach

I have already mentioned above how behaviourist explanations might be supplanted by interpretations based on Langer's account of animal mentality. Insofar as behaviourist thought has been combined with information processing models to form cognitive-behaviourism, it is noteworthy that such an amalgamation has led to the development of a number of hierarchical models of human mental functioning (see Williams, Watts, McLeod & Mathews, 1997). There would thus seem to be scope for interpreting such models in terms of the present hierarchical model based on the formative tendency.

(v) The psychoanalytic approach

With respect to the interpretation of psychoanalytic thought in hierarchical process terms, significant inroads can be made, in my view, on the basis of the following interconnections. For a start, the notion of a developmental hierarchy is intrinsic to Freud's theorizing and that of many of his followers. In particular, the emphasis on developmental process by object relations theorists—W. R. Fairbairn, for instance, was much influenced by Whitehead—could see a reinterpretation in terms of the nature and logic of the formative tendency and a building up of a person-centred theory of personal development. And then, as far as Freud's key concept of the unconscious is concerned, reinterpretation of this notion can be achieved, as I see it, on the basis of Langer's explication of a mode of human consciousness, non-discursive awareness, having emerged subsequent to animal mentality and prior to

rational, discursive awareness. Langer's account of non-discursive awareness is based on Cassirer's portrayal of mythic consciousness, where both she and others have seen an equivalence between Casssirer's depiction and Freud's characterization of those "primary processes" that represent the defining characteristics of the psychoanalytic unconscious (see Langer, 1949). As Alfred Lorenzer comments: "It is remarkable that Cassirer arrives at a description of mythic thought that corresponds exactly to Freud's presentation of "processes affected by a primary process"" (quoted in Krois, J. M. 1987, pp. 83-4).

(vi) The transpersonal approach

On the matter of employing the present conception of the nature and logic of the formative tendency to scientifically make sense of the contributions of transpersonal psychology and the realm of the "spiritual," it is perhaps worth reiterating that logic deals with any and every realm of human experience—"spiritual" reality is in consequence just as substantial from such a point of view as "material" reality. When, therefore, Langer draws attention to our calling "a certain series of successively "higher" spiritual experiences "the ladder of faith"" (1953, pp. 28-9), she can be seen to be alluding to a scheme expressive of the hierarchical logic of the formative tendency. It is in the writings of Ken Wilber, though, the main proponent of transpersonal psychology, that we find the most detailed and substantive endorsement of the relevance of such a hierarchical scheme for interpreting the domain of the mystical and spiritual (see in particular, Wilber, 1995, chpt. 2).

2. The phenomenon of psychotherapeutic change

Earlier I employed figure 3 to represent that feature of the workings of the formative tendency dubbed "positive disintegration" by Dabrowski and "regress to progress" by Koestler, the "pattern of reculer pour mieux sauter, of a temporary regression followed by a forward leap" (Koestler, 1980, p. 439). Koestler sees this pattern as intrinsic not only to mental evolution in general, but to psychotherapeutic change in particular. "Psychotherapy, ancient and modern," he declares,

> from shamanism down to contemporary forms of analytical or abreaction techniques, has always relied on that variety of undoing-re-doing procedure which Ernst Kris, an eminent practitioner, has called "regression in the service of the ego". The neurotic, with his compulsions, phobias, and elaborate defence-mechanisms, is a victim of rigid, maladaptive specialisation—a koala bear hanging on for dear life to a barren telegraph pole. The therapist's aim is to induce temporary regression in the patient; to make him retrace his steps to the point where they went wrong, and to come up again, metamorphosed, reborn. (pp. 438-9)

The person-centred therapist's aim is simply to create a psychological climate facilitative of client psychotherapeutic change, and so person-centred practitioners would dispute Koestler's claim that the therapist's conscious intent is to make the client regress. But such a point aside, how valid is it from a person-centred point of view to interpret the pattern of psychotherapeutic change so facilitated as "regress to progress," i.e. in terms of figure 3?

Certainly Godfrey Barrett-Lennard (1980) believes that such a "regressive" interpretation of the nature of psychotherapeutic change is not in accord with person-centred theory. "Intensive, personal therapy," asserts Barrett-Lennard,

> in keeping with other potently formative experiences, has some of the elements and qualities of birthing. In the case of client-centred therapy, this does not imply regression to redo an earlier stages of development but does connote emergent shifts in awareness and ways of processing experience, broadly in the direction of a more self-transcending way of being. (p. 118)

According to Barrett-Lennard, therefore, the person-centred theoretical interpretation of psychotherapeutic change is that of a straightforward gestalt switch, as depicted by figure 3 of an instantaneous shift from C_1f to C_2f.

At first sight, Barrett-Lennard's position would also seem to be that of Rogers himself, who in his 1959 theory statement identifies the positive transformation of the "gestalt" of the person's self-concept as the core feature of psychotherapeutic change. Defining the self-concept as "a gestalt which is available to awareness," Rogers compares the change from old to new self-concept to "the favorite text book illustration" of a gestalt switch, that involving "the double picture of the old hag and the young woman" (1959, pp. 203 & 201). In other words, psychotherapeutic change consists in an instantaneous pattern shift.

But that this is not the whole picture is made plain in a more detailed account of such a gestalt switch given by Rogers in *Client-Centered Therapy* (1951). There Rogers relates that when in client-centred therapy the client experiences an

> atmosphere of safety, protection, and acceptance, the firm boundaries of self-organization relax. There is no longer the firm, tight gestalt which is characteristic of every organization under threat, but a looser, more uncertain configuration. (1951, p. 193)

Under the auspices of this looser, "sufficiently relaxed" self-configuration the client "discovers experiences of which he has never been aware, which are deeply contradictory to the perception he has had of himself, and this is threatening indeed" (p. 193). The person, says Rogers, may retreat "temporarily to the former comfortable gestalt, but then cautiously moves out to assimilate this contradictory experience into a new and revised pattern…It involves more accurate symbolization of a much wider range of sensory and visceral experiences" (p. 193).

"Essentially," Rogers declares, "this is a process of disorganization and reorganization" (p. 193). Which said, might it not be more accurate to term it a process of organization, disorganization and reorganization. That is, of regress to progress as depicted by figure 3?

Is, then, the pattern of psychotherapeutic change in the client one of a straightforward gestalt switch from less to more comprehensive, or is there an intervening stage of regression?

Logic would appear to dictate that there is at least some form of disorganization or loosening of an existing pattern (gestalt) in order for new more primitive components to be incorporated into a more comprehensive pattern. Perhaps whether we designate the disorganizational phase a regression or not may depend on how extensive is the disintegration or loosening of the existing higher-level form. So, for instance, John Perry, claims that psychosis can represent a condition of regression prior to progression to greater personal integration. In line with person-centred theory, Perry relates how the provision of a psychotherapeutic environment can transform an early intense psychotic episode into "a disintegrative phase of what may be regarded of a developmental process" (Perry, 1999, p. 3).

Further light is shed on this issue, in my view, by Erich Fromm (1982) in his account of the nature of "regression" in the context of psychoanalytic psychotherapy. "If the analysand during the analytic hour becomes a child altogether," declares Fromm, "he [sic] might as well be dreaming" (1982, p. 43). According to Fromm, regression in therapy is not that of the client's total self, but of a part of it. The person doesn't literally become a child again, but exhibits an "oscillating" awareness of their adult self on the one hand, while focusing upon infantile self-experiencing on the other, i.e. upon self-experiencing of an evolutionary earlier and less complex nature.

Seen in this light, figure 3 could be taken as specifically referring to a particular part of the self that has to be dismantled into its lower level constituents in order that a more comprehensive higher-level integration can be achieved. A metaphor for the psychotherapeutic process might thus be that of building a brick house and then realizing that not only are there some bricks left over, but that instead of a porch at the front of the house there is simply a brick wall. In other words, bricks earmarked on the house-plan for constructing a porch had either been unused or used to fill in the hole in the wall intended as the entranceway inside the porch. To remedy this state of affairs, the part of the wall filling in the hole would first have to be dismantled into its constituent bricks. These bricks could then be combined with those left over in order to create the more comprehensive gestalt of the porch and entranceway. In other words, just a part of the house would have to be dismantled.

Such a conception of psychotherapeutic change as involving the essential retention of the higher level pattern of the self, while bringing into focus lower level elements that either do not fit or have yet to be employed, accords with both the views of Rogers and Gendlin. Both refer to psychotherapeutic change as the focusing upon and incorporation into the self of "gut-level," "unverbalized visceral" "experiencing," at "the edge" of awareness (Rogers, 1980, p. 158; Gendlin, 1996, p. 17).

It is in light of this notion of incorporating such lower level process into a person's self-gestalt that Dave Mearns and Brian Thorne (2000) propose reconfiguring "Rogers' concept of Self" to include ""subceived"…."edge of awareness" material" (p. 175). Such a proposal merits consideration, but does seem reminiscent of Rogers' essential two level theorizing. If it is indeed intended to mean defining the self in terms of merely two levels of organismic activity, this would differ from the present hierarchical scheme which points to the definition of self on a more-than-two, multi-level basis.

Concluding Remarks

There are advocates of the person-centred approach who consider Rogers' formulation of the formative tendency to be a step away from science, a product of his "loopy" later years, a symptom of the "Californication of Carl Rogers". Mearns and Thorne (2000), for instance, "suggest that Rogers' development of theory was not advanced during his "California" period" (p. 89). I would like to think, though, that the preceding discussion might prompt those who hold such views to think again. Indeed, that it might encourage all who have an interest in the further development of person-centred theory to take Rogers' concept of the formative tendency extremely seriously—notwithstanding that he conceived it in while "taking it easy" in California. My hope is that the formative tendency will eventually be judged to have been a very fruitful notion, not only for the scientific development of psychology as a whole, but, in particular, for our scientific understanding of psychotherapy. With Whitehead, I would suggest that "we have to ask ourselves whether nature does not contain within itself a tendency to be in tune, an Eros urging toward perfection" (1933/67, p. 251).

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