Mind and Nature

Essays on Time and Subjectivity

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CONTENTS

Preface ix

Acknowledgements xvii

Part I Metapsychology 1

Chapter 1 Foundations of Cognitive Metaphysics 3

Chapter 2 The Concept of Momentariness 16

Chapter 3 Fundamentals of Process Neuropsychology 33

Part II Consciousness 45

Chapter 4 Psychoanalysis and Process Theory 47

Chapter 5 The Unconscious (Freud) and Process Theory 63

Chapter 6 Consciousness and the Categories of Nature 86
Part III
Agency and Value 103

Chapter 7
Neuropsychology and the Self-Concept 105

Chapter 8
Subjectivity and Scientific Thought 122

Chapter 9
On Aesthetic Perception 144

Notes to Chapters 163

References 175

Index 177
Tumult and peace, the darkness and the light
Were all like workings of one mind, the features
Of the same face, blossoms upon one tree;
Characters of the great Apocalypse,
The types and symbols of Eternity,
Of first, and last, and midst, and without end.
Wordsworth
PREFACE

This book picks up where the last one left off, with what was left unsaid or unfinished, or with ideas that deserved further explication, as if I could never quite say enough about a topic, or perhaps, as a fact of psychological interest, that between any two sentences there is another book just waiting to be written. Like my other books, all of which followed an early period of clinical studies, it is driven by a single theoretical perspective, with the original data being revived, not as facts to be referred to or justifications, but as patterns of thought that guide the intuitions along, so that a reader hungry for evidence, or for the research or clinical material on which the theory is constructed, will have to retrace the path taken by the author himself, if he or she wishes to fully understand the coherence of statements in an exposition that is a diachronic evolution of thought, in the same way that the theory itself is evolutionary.

At the very outset, I want to stake out, in simple terms, the position taken in this book. The claim is that Cartesian dualism is still very much the problem to be addressed. Those who postulate a reduction of mind to brain, or an elimination of mental events in the name of future neuroscience have, it seems to me, a laziness of thought, or expediency, that makes them gloss too readily over issues of great depth that have troubled the best philosophical minds. On the other hand, the nowadays rare individual who takes an idealist position, and I was myself long in this camp, needs to find a path back into the physical world which, I think, is helped by considering the relevance for philosophy of clinical phenomena, where the physical and mental degrade as a unit. In this respect, this book records a shift in my own thought from idealism to process monism, in which the physical and mental are viewed as manifestations at successive stages in the evolution of a single process.

How could there not be a continuum from the non-cognitive to consciousness? This continuum, however, need not run from a low level physical series to one of increasing mentality. If we cannot describe the passage from physical nature to mind in terms other than purely physical, or purely mental, that is, from one side or the other of the Cartesian
impasse, our theories of mind and nature must be defective. Matter does not become mind at some point of intricacy but anticipates mind at every point. There is no gap or Rubicon beyond which mind appears. A continuum requires the physical and mental to evolve together into progressively more complex ensembles. This scenario is not pan-psychic, but it does entail that the (pre)conditions for subjectivitytemporal becoming and categorical existencedo obtain at every level and in every actuality, so that mind develops, so to say, from within by an expansion of the becoming of basic entities. This book is a search for the laws of that evolution, not by the more typical strategy of presuming that consciousness is a compound of the data of physics, or that the lower the level of explanation, the more powerful, but by tracing the categories of experience from the cognitive down to the foundational process of nature and then, by an adjustment of physics, recovering an adequate theory of the mental from its basic ingredients. As Heraclitus said, the road up and the road down are the same.

What is meant by a category of experience? The consciousness of an object engages the mental state in an act of cognition that includes the object as its 'objective' segment. This is itself an object with a complex structure. The correlate of the perceived object 'out there' in the world, in relation to which the perception appears like a screen, is a segment in a phase-transition in the brain state. The immediate correlate of a tree in my conscious perception is the brain activity that generates the image of self and world of which the tree is one part. The perceived object, i.e. the 'objective' portion of my mental state, is the nominal referent of the act of cognition, but in order to achieve that object many phases in the mind/brain state intervene, and each could be said to correspond with some aspect of the external world. I think it is preferable to hold that these phases correspond with phases in brain process that, collectively, give a model of externality.

What externality is being modelled? The object 'behind' the perceptual object, the real or noumenal object, the object that is registered by neurosensory data, can be taken to exist as another sort of entity, more or less complex than the mind/brain state that perceives it. This object has its own dynamic structure, whether an atom, a tree or another person, with phase transitions of varying complexity. Of the totality of actualities that constitute the world, including the minds that actualize in that totality, each one has a transitional and a categorical 'structure'. The categorical existence of the phase-transition of a basic object constitutes its incipient subjectivity, its 'in itselfness', independent of the mind that happens to perceive it.

A percipient mind actualizes a self, acts, memories, ideas, images, objects. In the course of an actualization, the self is an antecedent phase, the object a consequent phase in the same process. The entire fabric of an act of cognition, from self to world, is a single process. The break between
mind and world, the disjunction of the self from its objects, is illusory. Every cognition is molded by the 'out there' to generate a more or less accurate model of reality and constrained by patterns of neural process that tend to be repeated. A tree is revived every moment, it becomes what it is, it does not just persist, it renews itself, and each renewal is slightly different than the prior occasion. This difference is the basis for novelty. The novelty in the renewal is the basis of change. This is also the source of novelty in an act of cognition. The papers in this collection are all guided by this metaphysical presupposition.

Part I

The initial section of this book deals with accounts of 'becoming' in the two major systems of philosophical thought that have affinities with microgenetic theory, the process philosophy of Whitehead and the Buddhist concept of the arising and perishing of the moment. These are both process theories that provide an alternative to the hegemony of contemporary substantialism. The doctrine of substance has a long history in science and philosophy. The pervasiveness of the doctrine, and the intuitions that support it, reflect the tendency of the human mind to both form categories and analyse them. If metaphysical presuppositions are underwritten by an unconscious cognitive bias, what is that bias, and what are its origins?

Substance theory is inevitable. Perception creates objects and a subject to enjoy them. The idea of substance begins with the first partition of a thing from its context, whether subject and object, an individual from its environment and history, or an atom from the duration of its cycles. Indeed, the first appearance of the discernible out of the invisible is already a commitment, a discrimination. Boundaries are established that mark off separate things. However, for process philosophy and Buddhism, a concrete entity is an actualization, an outcome, not a demarcation or a starting point. In this process, indeed because it is a process, time and change play a central role. The problem for process thought is not so much the transition from one solid to another, though how this occurs is far from clear, but the more fundamental question of how the 'solids', the phenomenal stabilities or the concrete actualities, are created in the first place. This is not as great a difficulty for substance theory, which assumes self-standing causal entities. In the critique of the later Buddhists, they have svabhava, self-nature, that is, they are aggregates of discrete events or synchronic compounds of solids that are still more primitive.

Whitehead's response to this problem is the idea of a concrescence, a prehension, a process of unification, that is bounded by an arising and a perishing, a becoming of time and entities out of, and relapsing into, the timelessness of eternal ideas, while in Buddhism, there is an unspecified construction of phenomenal entities out of the flux of the Absolute that, for oneness, in enlightenment, is stripped away to expose an underlying
relationality that is fundamental. In a sense, process philosophy fills in the gap between the concrete world and the Absolute that Buddhism leaves unexplained. Yet, some schools of early Buddhism postulate elemental substances in the Absolute, and even some theorists of process, including Whitehead, concede to substantialism the changelessness of entities such as mathematical concepts, eternal or Platonic ideas, Kant's noumenal self, which, being out of time, thus timeless, constitute a kind of radicalization of time elimination.

That a theory of the mind/brain which developed on the observation of clinical disorders has led quite independently to an account of process that maps to these two great metaphysical systems is a forceful argument for the correctness of those insights on which the theories are based. Further, the concordance of the philosophy with patterns of behavior, inferred from pathology, suggests that the laws of mind and nature are reciprocally discoverable, that is, that mind is an outcome of the process of nature and, similarly, that metaphysical ideas are products of the form-creating activity of the mind. This has been argued by, among others, Eddington, who claimed that the fundamental laws of nature could be derived from the laws of human mentation. He wrote, 'we must regard the feeling of "becoming" as (in some respects at least) a true mental insight into the physical condition which determines it.' Dean Inge put it more poetically: 'the same power which slumbers in the stone and dreams in the flower, awakens in the human soul'.

A theory of becoming is retrospective, it is the creation of the present out of the past, or the revival of the past in every actual occasion. In this manner, becoming is tied to evolutionary and genetic concepts. An evolutionary perspective is essential if thought is to be conceived as a species of process in nature, that is, if the laws of physical nature are held to apply to cognition. In process metapsychology, an act of cognition is a momentary actualization, a becoming, that replicates patterns of evolutionary growth. These patterns, like the deeper process of change they represent, are concealed from observation. That is why they are best studied in cases, such as those of mental disorder, where the submerged is suddenly thrown into view. The study of such cases reveals the lines of dissolution, and by implication the formative dynamic, that recapture and sustain the growth trends of non-cognitive nature into mental process. Thought and perception are modes of growth, and growth is a mode of change. The uniformity of change in cognitive and non-cognitive systems, and the correspondence of this process with evolutionary patterns of growth, provides a basis for a metapsychology of organic and inorganic nature.

Part II

The two papers on Freud's metapsychology bring into relief some of the philosophical problems attendant to a description of the laws of menta-
tion in relation to a source of clinical data other than that of brain pathology. The Freudian corpus constitutes the sole metapsychology, apart from that of microgenesis, that is based on clinical studies. In my opinion there are grave difficulties with the foundational concepts of psychoanalysis, though certain features of the topographic and genetic models are relevant to process thought, as in the objectification of the conscious present out of the personal past. Moreover, though psychoanalysis is concerned more with unconscious than conscious thought, the implicit progression from the unconscious to consciousness contains the seed of an actualization concept that, at least in the hands of Schilder and Rappaport, has some resemblance to a cognitive becoming. On the other hand, the two most important papers on the metapsychology, the Project, and the Unconscious, do not provide an authentic account of process in mind or brain, since Freud relied almost completely on drive-energetics to introduce an ad hoc dynamic that could activate the benign surfaces of inert traces.

Consciousness is, so to say, on everyone's mind, like a crown of laurels, it is the holy grail of current philosophizing. The claim that consciousness is the most complex of all known phenomena is easy to make, hard to prove. Certainly, there is complexity in the discussion of the topic, but is consciousness equally complex? I would, in fact, argue the reverse, that consciousness is exceedingly simple! Proclus said, only the highest and lowest are simple, while all between is complex. What could be more simple than the timelessness of a virtual memory in which the mental state arises, or the timelessness of a virtual duration, the conscious present, in which it perishes, while between the two (essentially the entire field of psychology) one finds the multiplicity of temporal facts and attachments of everyday life, the simplicity of an eternity on either side of complex temporal data, a self-creation out of eternity that is, as Goethe wrote, an ever-creating vocation.

The simplicity of consciousness is linked to the nature of categories, the topic of the ensuing paper. Natural categories condition theory to reflexively assume that all entities are relationless, or that temporal and spatial connectivities can be pasted to object boundaries. Categorical frames of thought become fixed entities dividing permanence and flux. The flux is an abstraction within the category, the category, an abstraction over the flux; substance is category all the way through. By an alignment of thinking with the natural direction of analytic thought, beginning with those of the 'highest' gradethe boundedness of the self, its separation from other objects, introspection, self-scrutinythe division of categories proceeds by an increasing partition within the self down to the unseen particles of final origination that are nested in the Absolute.

That a category is a mental structure does not mean it is a product of mind alone. The continuity of the categories of mind with those of nature is the metaphysical ground of autonomy, which is a stage in the process of
category formation. A substance, an object, a self, are all categorical objects. The boundaries of entities are fuzzy at the extremes of scale. Consciousness and quanta are categories rather than things. In between, in the range of mid-sized objects such as chairs and trees, entities no longer seem to be categories; instead, they appear to be concrete and well delineated. The categorical is above us and below us, but invisible objectified in the middle range where life passes.

In this middle ground the perception of stability is overpowering; we cut events out of continua and objects out of events. Even a point-instant, in Buddhism or in physics, subsumes a temporal thickness without temporal parts that is derived from fundamental temporal extensibility and is spread out over the cycle of its continuation (becoming). Timothy Sprigge has written that continuants are 'concrete universals' in the relations of the temporal series that constitutes their becoming. The duration and phases of a becoming are inter-dependent. The process lays down the object, the category gives it the stability it requires to be what it is. Becoming is the key. An actuality never endures, concretely, it is never fully present, but perishes as it actualizes. Referring to this immediate pastness of actualities and the retrospective quality of mentation, Charles Hartshorne wrote that the paradigm for cognition is history, not mathematics.

Part III

The final section extends microgenetic theory to the nature of the self concept and its relation to culture, value and aesthetics. In some ways, this is a search for the moral implications of the metapsychology. Consider Whitehead's remark, 'I sometimes think that all modern immorality comes from the Aristotelian doctrine of substance'. While this gives too much to philosophy and too little to human nature, what is the connection between substance and immorality? A self that observes its own acts is the first step in a moral decision. The next is a choice between acts. The immoral is not spontaneous. An agent must evaluate an act in relation to the objects of its needs or desires. Agency is autonomy in relation to choice. Choice presupposes agency but is not obligated by it. Nor does the choosing entail real choices, rather, the availability in the mind of options, or the awareness of possibility.

Morality is a judgment based on choices, but it is conditioned on a projection of value to the other, really, an absorption of the other in the self's own valuation, which is the antithesis of autonomy. The distribution of values inclines the agent to that option on which the moral judgment rests. Ultimately, these are the self's own attachments. In the maturation of a personality, ideally, the field of value widens from family to friends to nation, to the point where, as Hartshorne wrote, the individual is a 'trustee for living things in its part of the cosmos'. Emmanuel Levinas
 wrote, 'I am responsible for the other without waiting for reciprocity'. To love, to take someone into your heart, to share your feelings with another, to be vulnerable to loss, is to subsume another in your boundedness. Fear and anger are also valuations. The other is not a neutral entity; it threatens to violate the autonomy of the self, its impunity. Unlike the sought-after, the willing embrace of love, the other penetrates the self as an intruder. This widening of the personality is a reclaiming of antecedent phases of animistic thought usually traversed in the surge to objectivity. In this respect, the other becomes an artwork, an aesthetic object, a creation of feeling prior to boundaries, separation, individuation. In loving, in empathy, the subjectivity of primitive thought becomes the shared experience of a common humanity.

A phase of magical thinking is engaged in every act of cognition. The primitive in thought is the ground in which the psyche individuates. Even the idea of substance is a remnant of animism, where the causal power in objects is the agentic aspect of the psychic deprived of its freedom. The psyche is bathed in otherness as it strives for independence. Autonomy is set against this background. Dorothy Emmet has written that the primitive does not project his self-awareness into the world but 'starts from a sense of the continuity of his functions and activities with those of an environing world . . . [and] as conscious thought develops these vague surrounding potencies are endowed with form and thereby "objectified", and at the same time man comes to a consciousness of himself as a distinct subject over against them.'

Feelings are tokens of subjectivity. They anticipate consciousness as covert motivations, go beyond the limits of privacy and deposit in external objects. Subjectivity is constantly being lost in actuality. We can retain the subjective by extending it into nature, as in primitive thought, in art or in religion, where objects are imbued with psychic qualities, or by drawing those objects within us, to their origins, to the interiority that is the basis of the aesthetic response. The renunciation of psychic individuality to the eternity and immutability of the Christian God, if not that of Whitehead, differs from the entrance to the Buddhist nirvana, which is an unveiling of the phenomenal for the sheer becoming of the Absolute. This distinction pivots on an axis of feeling in a transcendent immersion. Does one follow a stream of feeling from object valuation through its underpinnings, in feeling, to the instinctual unconscious, primal feeling or will, or is feeling tone a subjective distraction in the pursuit of naked objects back into the void? If nature is suffused with feeling, a dissolution of the temporal would leave total absorption in a felt eternal present.

The contextuality that remains behind in the attainment of autonomy softens isolation with humanity. It is not the autonomy but the residual valuation of the self, its goals, that determine the locus of an action within the self-concept. The autonomous self must find its way back into the world. Devotion is a doorway to otherness. We are helped to recognize all
selves in the One, a uniformity that becomes a diversity when the potential in unity inclines to some path of actualization. The futurity of potential, its implicit aim, is its lack of homogeneity, even if the specificity of future parts has not yet been established. Like notes in the score of life, we actualize, as Tagore said, in 'the music of the great I AM'.

In great souls, the self disowns autonomy and surrenders to the mind of deity. The rediscovery of oneness proceeds to a unity of the corporeal in the sea of being. Mind, the vehicle of this return, is shed once unity is achieved, for the categories of nature, continuous with mind, are bridges to their own awareness. We are One in matter and in Spirit, which is the life of matter in change. The great soul teaches us the oneness that was our birthplace, when we first emerged, from unity, like separate leaves on the tree of life. We know the unknowable because it is within us.

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PART I
METAPSYCHOLOGY
Chapter 1
Foundations of Cognitive Metaphysics

Philosophical materialism enjoys a large body of empirical support in cognitive psychology precisely because the agenda of the psychology is motivated by the very concepts the philosophy endeavors to explain. This is not the case in process thought where the genetic concepts that underlie evolutionary and developmental theories have had scant impact on process studies and there is little or no interpenetration of philosophical analysis with psychological research. This is not a promising state of affairs.

The purpose of this chapter is to explore some of the implications for process philosophy of a new approach to brain psychology and the dynamics of the mental state-microgenetic theory that has developed out of the study of symptoms in neurological cases. This approach has much in common with process metaphysics, especially in the concept of time, change and the actualization (becoming) over phases in the brain in the momentary development of a cognition.

Microgenesis and Process Theory

Microgenesis refers to the actualization (Aktualgenese) of a cognition over 'layers' in mind and brain that retrace growth patterns in phyloontology. 1 The recapitulation that is the cornerstone of historical theory is a repetition of the antecedents of a behavior that phyletic or ontogenetic process lays down. In its simple form, the theory held that a cognition develops over anatomical stages in the brain. These stages are entrained at successive phases and are aligned in a sequence that reflects evolutionary growth. This was the shape of early recapitulation theory as applied to brain and behavior. There were some who postulated a retracing of archaic repertoires that remained embedded in the final behavior, for example Paul MacLean's notion of a reptilian and protomammalian brain within the mature human brain.2

Gradually, it became clear that it is not the stages or the behaviors that are reproduced but the configural properties of the process through
which they actualize, that is, the process is revived, not the actual elements into which it deposits. Moreover, the earlier concept of a collapse of the millions of years of phylogeny, or the lifespan of ontogeny, into the milliseconds of a cognition, or the idea of a process that continued over evolutionary, lifespan and cognitive durations was replaced by the concept of an iteration of a single process or pattern that binds together the different time frames.

More precisely, the duration of phyletic or ontogenetic process is not the evolutionary (maturational) history of a species (organism); the former is more accurately the sum of its ontogenies. Evolution is a population dynamic, ontogeny the life story of an individual. From the individual standpoint, evolution is the antecedent line of all prior ontogenies for that organism. Thus, the question, what exactly is an ontogeny? The conventional view is of a process that extends over the life-span. But there is a way of regarding ontogeny as a moment of growth that is cyclically revisited. What is the lifespan if not a temporal aggregate that is woven by the mind into a seamless thread from the series of discrete momentary actualities.

If this is the proper way to interpret ontogeny, the duration we are seeking would not extend from infancy to senescence; ontogeny is not the longevity the growth and decay of the organism from birth to death. Rather, the duration of an ontogeny lies in the covert process that deposits the organism each moment and at every phase in its life cycle. In this way of thinking, the momentary actualization of the organism, its becoming, is the fundamental note from which the melody of development is composed.

Every becoming of the mental state (microgeny) creates a novel moment. The moment has to be novel for change to occur. The absence of novelty is sameness or identity. An entity cannot be self-identical from one moment to the next. This would imply an absence of change, thus an absence of time. The novelty of the entity, its temporality and change from one moment to the next, are codependent phenomena. The becoming creates the novelty as well as the duration through which the entity momentarily exists. Each novel moment is a constituent of an imaginative series over which the entity endures.

The genetic concepts can be related to those of change and time. Instead of the microgeny occurring over an objective duration that is linked to other genetic processes, one can say that the microgeny of the mental state does not fill time or 'take' time but is time-creating! The microgenesis of an object elaborates the time in which that object exists and is enjoyed. The momentary state is a universe of time and change. This world of the moment, which is all we know, becomes the setting for an illusory extension into longer or shorter time scales which then seem to occupy a portion of an external time in a relation of the phenomenal to the absolute.
There is a distinction here of a potential time that becoming creates, and a container time over which the becoming occurs. The distinction is important, as is the choice, because in making it one takes a stance on the frontier of the conceptual. Microgenesis is firmly committed to the subjectivity of temporal experience. Whitehead alluded to this distinction and proposed that mental space-time conforms to the dominant space-time of nature: he was led to the position 'that we are aware of a dominant space-time continuum and that reality consists of the sense-objects projected into that continuum' (ENP 102 3).

Leaving aside the details of the theory and its clinical basis, which have been discussed at length elsewhere (LM), microgenesis can be characterized as a whole-to-part specification that recurs in rhythmic overlapping wave-fields, i.e., wave fronts, oscillators. The sequence is obligatory, recurrent and unidirectional. The cascade of whole/part shifts over evolutionary growth planes in the brain leads from a core in upper brainstem through limbic formations to the neocortical rim. The progression is from the intrapsychic to the extrapersonal, from image to object, from self to world. Consciousness is a configuration over phases in the same mental state, those that lay down, in succession, the self, personal space and the external world. This relation, as with every relation, is not instantaneous in an instantaneity, relations are annihilated but depends, as Whitehead pointed out, on a virtual duration that is derived from an imaginative reconstruction of the specious present (ENP 100).

**Divisibility**

In a microgeny the succession of phases is ordered from earlier to later (SP; TWMP), though a complete traversal of all phases is necessary to establish a self, a world and a phenomenal now. Since the specious (phenomenal) present (see Figure 1.1) is extracted from a disparity across surface and depth phases, the disparity in order for there to be one obligates a realization of the entire sequence. But the phases do not have an independent existence until the becoming terminates, i.e., achieves an actuality, after which the phases constituting that becoming can be delineated. Without an actuality, the phases are 'out of time' and therefore non-existent.

The brain state is indivisible, yet it is a complex entity. The indivisibility reflects the non-temporality of the succession of phases in each occasion. The epoch over which the phases are distributed, i.e., the subjective duration the entity elaborates, not its enactment in physical time, does not exist prior to its completion. The reconstruction of a phase-sequence is a retrospective act. The becoming is atomic, an indivisible unit of time. This temporal unit must first be created before its phases can be hypostatized.
Figure 1.1.
The state at T-1 is incompletely revived at T-2, less so at T-3. The duration of the present is extracted from the disparity between the 'surface' at T-2 or T-3 and the embedded 'floor' of T-1 or T-2.

Similarly, for Whitehead, the temporal passage in a becoming was not 'to be construed in the sense of a uniquely serial advance' (Whitehead, 1929 (hereafter cited as PR), p. 35). A becoming is not divisible into parts, though a gradation of phases can be described. The analysis of an entity is an intellectual act. Indivisibility is not a sign of simplicity. Indivisible objects are not basic entities. Indeed, there are no basic entities.

For some Whitehead scholars, the analysis of concrescence into phases, and the account of a sequence of prehensions, are inconsistent with the concept of a nontemporal becoming. Sequence and phase are temporal concepts. But a phase does not count for something until there is an entity. An entity creates its phases no less than it is created by them. The completion of the becoming does not require that a set of phases complete its cycle but rather that the entity become itself, i.e., whatever it is. Waiting until the concrescence is complete before its analysis can take place is not a waiting for the details of the genetic sequence to be revealed. Successive states are 'called up' and ordered. The calling up creates the order. The ordering creates the temporal unit over which the calling up occurs, but not before a whole entity is achieved.

Clearly, a comparable paradox bedevils microgenetic thinking. The identification of segments in a continuum introduces an arbitrary demarcation. The continuum must objectify before the segments can be identified, but even then their demarcation is not possible. In the succession of phases, the direction is anisotropic. The formative sequence of brain evolution guarantees the direction of the actualization. Evolution and growth are constraints on the direction of process. If cognition is unidirectional, like phyloontogeny, the direction from past to present entails that a comparable sequence of phases in the microgeny should be discernible.

In each microgeny, phases are conceptual anchors in the continuous flux of change. The change within a microgeny is novel and indeterminate prior to an actuality. Every phase is a potential for the ensuing phase. A phase in transition is insubstantial, unbounded, like a wave in the ocean. The concept of phases or segments in a continuum, i.e., when boundaries are assigned, if taken too literally, may be irreconcilable with a whole-to-part process. Segmentation implies a concatenation or, if a continuity, one