A Heritage of Activity: Development of Theory

(history, theory, occupation)

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This paper examines the nature of theory development and its implications for theory and practice in occupational therapy. The heritage of activity is traced from the early thinking of occupational therapy's progenitors, and principles are identified from that era that are viable for today's theory and practice. It is argued that the field (occupational therapy) should build its theory around the concept of occupation. Finally, sociopolitical issues affecting the development of theory are examined.

The Process of Theory Development

To understand the process of theory development, it is useful to explore the evolution of ideas concerning theory among philosophers of science. According to Aristotle, scientists induced generalizations about the world and by logic deduced from these general theories statements or predictions that could be observed for their empirical validity (1).

The logic of deduction can be neatly defined; however, inducing theoretical generalizations requires an intuitive leap or creative invention. Consequently, theory arises from human inventiveness and depends on insight. That science begins with human intuition has always been disconcerting to philosophers of science. This reality raises questions about the dependence of theory on deep, unexamined precepts and, ultimately, about the relationship of theory to truth.

Although early philosophers such as Aristotle, Galileo, and Descartes sought absolute truth, later philosophers of science, such as Newton, emphasized how empirical study and the use of logic in the deductive phase would steer the theoretical inventions of the mind in the path of truth (1). More recent philosophers of science, Mill (1), Hempel and Oppenheim (2), and Nagel (3), further refined this process of theory validation whereby a hypothesis is derived from theory and tested in the empirical world. They argued that, if the hypothesis is disproved, then the theory would self-correct because its preconcepts or first principles would have to be rejected. Implied in this view of science was the notion of stockpiling information. Theory was expected to progress in a linear fashion as more and more facts were accumulated.

In time new insights emerged regarding the problems of testing theory. Kant saw theory as a reflection of the knowing mind (1). Theory was not only an explanation, but a context within which explanation was possible. This realization led to new problems. For instance, Grunbaum argued that it was never possible to test a hypothesis because the sense with which evidence was attached to any hypothesis was determined by the theory (4). Hesse (5) and Hanson (6), in addition, pointed out that the observational language used for empirical verification of theory was so dependent on the theory as context that no empirical act could ever stand alone as a test of theory. Hesse (5) and Scriven (7) thus argued that theory was not disproved or tested through empirical research. Rather, empirical investigation was a means of further making sense of the world given the preconceptions of the theory as the unexamined vantage point. Through research, theories simply become better systems of thinking.
about, explaining, and controlling the external world.

Such modern philosophers of science as Toulmin (8), White (9) and Kuhn (10) point out that the philosophical assumptions that constitute a context for theory development are basic and necessary. Kuhn refers to them as the paradigm of a field. Without the overall and coherent structure they provide, persons cannot engage in the process of articulating and refining ideas, concepts, and facts. Every scientist takes on first principles or basic assumptions that determine what is learned about the world. As noted, historical attempts to separate philosophical premises or assumptions from theory resulted in the discovery that they were essential to theory: any field's theory development necessarily begins with philosophical premises.

Many modern philosophers of science also discount the view of theory as a cumulative stockpiling effort. Kuhn argues that theory does not progress in a linear fashion, but can involve radical shifts in fundamental views when one set of first principles is replaced with another (10). This occurs for a variety of reasons, including human and political factors. As Ritzer argues, science demonstrates the same sensitivity to psychological and social forces as any other human activity (11).

The thrust of these points is that theories always entail important general premises that offer a way of seeing and understanding the world, and that they may be radically influenced by psychological, social, and political forces. These fundamental elements of theory should concern us as much as the process of refining and articulating theory since all aspects of a theory can only be as good as its most general principles. To develop theory is not merely to follow rules, but to actively, honestly, and thoughtfully construct and direct scientific activities. Consequently, insight into occupational therapy’s processes of theory development is required. My subsequent comments are directed to that end. They are organized around the following questions:

1. Has the course of theory development in occupational therapy been a linear and progressive stockpiling of information or has the course contained radical shifts in fundamentals, and, if so, what are their implications?
2. What is the degree of integration of current theory in occupational therapy and its relationship to the first principles or philosophical base of the field?
3. What political and social forces have come to bear in the field that affect the development of theory?

The History of Theory Development in Occupational Therapy

The way in which one views the history of theory development in occupational therapy influences how one sees present and future issues in the field. There are currently two different perspectives on our heritage of activity. Proponents of the first viewpoint see occupational therapy’s history as a process of maturation from its ill-formed, and largely atheoretical beginnings. This perspective proposes that the field has adapted to changing times, health needs, and health care systems. The heritage of activity is accepted as a generic philosophy, but the science of therapeutic activity is largely biomedical. The idea of meaningful activity is viewed as a somewhat intangible if not impractical philosophical premise (12, 14).

Proponents of the second viewpoint argue that early occupational therapy, far from being atheoretical, was endowed with a rich intellectual and practical heritage from the 18th and 19th centuries—that is, from moral treatment and related humanistic themes (15-18). Early progenitors of occupational therapy are studied as important thinkers who imparted a conceptually unique theoretical basis to occupational therapy. Current occupational therapy practice is viewed as seriously deviating from the early theory and mission of the field (17, 18, 19). Emergent reductionist and biomedical ideas are seen as having competed with more than complemented and elaborated early occupational therapy theory (17, 18). It is argued that our theoretical first premises were replaced by others because of historical, psychological, social, and political factors. As a result the field’s body of knowledge was reconceptualized. Those who support this viewpoint stress the degree to which important early theoretical concepts have been eliminated from current practice (16, 17, 18).

To illuminate the relative validity of these two views of occupational therapy theory development, the next section examines a facet of the field’s heritage of activity—the concept of diversional occupations.

Diversional Occupational Therapy. Those of the first viewpoint see diversion as an anachronism. Early occupational therapy, it is argued, operated on the commonsense principle that it was good to keep patients busy, a conceptually lacking and hardly fundable perspective. Arts and crafts or other occupations seen as diversions (i.e., as complements to exercise or talk groups) are often deemed impractical (12, 13, 20, 21).

Those of the second viewpoint
would examine what the concept of diversion meant in early occupational therapy and contemplate whether it might have instructional value for current theory and practice. My examination revealed the following theoretical tenets.

First, it was proposed that human beings kept their hold on reality through occupation—in Meyer's words the organism "maintains and balances itself in the world of reality by being in active life and active use." (22, p 5) Second, it was observed that illness, disability, extended convalescence, and concomitant loss of occupation resulted in psychological deterioration that undermined both physical recovery and the patient's morale for returning to a productive status (23, 24).

The diversional role of occupations in physical disabilities was to focus patients' consciousness on productive tasks rather than on the pain and limitation imposed by illness (23, 24); to elicit and facilitate automatic lower brain functions when the mind was attending interesting and meaningful tasks (27); and to elicit the natural afflity of humans for accepting challenges and overcoming hardship—an innate mastery or achievement motive (22-24, 27).

A third tenet was that the basic dynamic of mental illness included an infusion of pathological thoughts into consciousness interfering with or replacing healthy thoughts that occurred in connection with performing life tasks. Since it was theorized that the mind could attend to only a single train of thought at one time, occupation was used to divert the patient from pathological thoughts to the reality of productive and playful tasks (25).

This concept of diversion was more than a common sense notion that it was good for persons to be busy. It was based on a theory of interconnected mental and organic processes and their relationship to occupation. It asserted that lack of occupation led to mental breakdown, invalid identity, and physical deterioration. These early occupational therapy theories are congruent with many current theories of conscious processes and their relationship to physiological events (28, 29), with concepts of persons' entry into a permanent dependent and helpless status (30), and with current theories of motivation (31, 32). Although the term diversion may not be timely, the concepts underlying its early use in occupational therapy are.

This examination of the concept of diversion illustrates that our theory development has not been linear and cumulative. Similarly, Rogers' discussion of independence and the environment demonstrates the discontinuity between current and traditional thought in the field (33). Radical shifts in the underlying philosophical premises of the field have changed not only the content of theory, but also the most fundamental ways in which theory is viewed (17, 34). The result of this radical shift is that current practice is divided by specialties with little in common and practice has little rationale for retaining its focus on occupation as therapy.

A continuity must be re-established between current theory and the theoretical first premises of early occupational therapy. Examination of early theory and practice revealed that three broad underlying premises constituted the main themes of early theory (34). The first premise was that human beings had an occupational nature. This included an assumption of mind-body unity and an assumption that action was necessary for maintenance of mental and physical functions. The second premise followed logically: It asserted that when illness or other conditions robbed the person of mental and physical activity, deterioration of both faculties would result. Thus a lack of occupation was potentially health robbing. The third premise was related to the first two. It asserted that, since occupation was a natural mode of maintaining the organization of body and mind, it could be used as a therapeutic measure—a means of restoration. The logic of treatment was that occupations would be made available to patients as soon as possible in their medical care to prevent further breakdown, to maintain capacity, and to restore functional losses.

These fundamental assumptions were lost when the original paradigm was left behind. Without them the field's commitment to using occupation as therapy was eroded.

Integration of Current Theory
The next consideration is the integration of current theory under guiding first principles. An occupational therapist programmed to know every detail of occupational therapy knowledge and given a rather average patient with the instruction to apply the field's theory would likely be unable to do anything. The problem is not that such a super therapist would not know enough. The reason his or her substantial information would not translate into practical therapy is that she or he would have no framework for interrelating its diverse elements. No wonder many clinicians opt to resolve the uncertainty by narrowing the domain of their concerns, often excluding or minimizing occupation in therapy. They find it difficult to justify occupation-based therapies because
They find it difficult to justify occupation-based therapies because the neurological, psychological, and other theories they have been taught are not spelled out in terms of their relationship to occupation. Occupation becomes an idle philosophy and clinicians are expected to close the gap between it and their theories. The first challenge for theory development in occupational therapy is to achieve a satisfactory organization of what has already been accumulated.

Williamson (35) suggests that occupational therapy uses many theories, which must be ordered and systematized as part of a model of the profession's practice. He also suggests that theories should be used with reference to occupational therapy's philosophical domain of concern. The issues of how theories are to be organized in occupational therapy and of what constitutes a unique body of theory for occupational therapy warrant further consideration.

There is ambiguity in occupational therapy concerning the appropriateness and function of paradigms, theories, frames of reference, and models that appear to stem from differential use and definition of these terms. This paper will not add to the confusion by proposing yet another set of definitions. An examination of the processes of organizing knowledge to which these terms refer is more to the point.

The earlier discussion of the philosophy of science stressed that general philosophical principles or preconceptualizations were critical to organized bodies of knowledge because they serve as a conceptual vantage point from which all subsidiary knowledge areas are organized and viewed. This does not mean that even pure sciences have only one theory. For example, chemistry must rely on both mathematical theories and theories from physics. What "pure sciences" do possess is a particular set of general concepts that determines what those subsidiary theories will "mean" and to what ends they will be applied. The existence of this generic organizational device (a paradigm, in Kuhn's (10) terms) gives a discipline its unique character. The configuration of chosen theories is secondary and depends on the nature of generic first principles.

To the degree that occupational therapy seeks to be a rigorous, applied science, the same is true of its knowledge base. The implications are twofold: (a) by whatever name, the global organizational framework for the field's knowledge should do more than collect together theories (i.e., it must determine what these theories will mean and how they will be used); and (b) the uniqueness of occupational therapy is determined not only by its configuration of theories, but also by the overarching conceptual framework employed to select, interpret, and use theories. Otherwise, the field will simply possess a body of knowledge that is ever more facts lumped together under loose philosophical constructs. For its theories to be integrated, the field must develop a central matrix of first premises. This amounts to the construction of a paradigm for occupational therapy (36). Christiansen points out that this adoption of a paradigm would allow theory development in the fullest sense. He argues that even prolific research without the universal and organizing precepts of a paradigm will not lead to a refinement and development of a significant body of knowledge for occupational therapy (37).

Generic and integrating principles for occupational therapy must do at least four things. First, they must be broad enough to encompass the range of occupational therapy knowledge, but not so broad as to fail to differentiate that knowledge from knowledge in other fields. Second, they should, as Mosey notes, be a filter for determining which knowledge is relevant to the field (38). Third, since occupational therapy practice spans biological, psychological, and social phenomena, they must be capable of interrelating diverse types of knowledge. Finally, they should demonstrate continuity with occupational therapy's original first principles.

Existing proposals for integrating principles include the concepts of adaptation, development, and activity (14, 39-42). Each concept illuminates important aspects of occupational therapy, but none meet these four requirements.

Adaptation is a health-related theme that the late Rene Dubos thoroughly articulated (43, 44, 60). He pointed out that the process of health is one of adapting to internal and external changes. He argued that health care, in the broadest sense, is in the service of human adaptation. As Kleinman and Bulkley make obvious, the concept of adaptation taken alone falls short of differentiating occupational therapy from a plethora of other disciplines (45).

The concept of adaptive responses and its related theme of purposeful activity does not require the field to maintain commitment to its longstanding focus on meaning in activ-
ity (14). Occupational therapists would do well to consider in this light the proposals of Engelhardt and Bockoven that the uniqueness of occupational therapy's mission in health care is its role as custodian of meaning in hospitals, clinics, and communities (46, 47). On these counts the concept of eliciting adaptation, while it can be an important dimension of the field, does not appear adequate as the first principle of occupational therapy.

Development or ontogenesis is a concept germaine to a range of disciplines and similarly does not delineate the special role of occupational therapy. Development has been a useful schema from which occupational therapists viewed patients to construct clinical action. However, it is insufficient as an integrator of concepts. The developmental framework is easily used to draw eclectically from several knowledge bases without adequate consideration of the compatibility of ideas with each other or with the mission of the field. It seems a convenient but indiscriminant framework for assembling knowledge that does not meet the criterion of being a filter for occupational therapy knowledge.

Finally, occupational therapists naturally recognize activity as a central theme of the field. It is a descriptor that often seems to make more sense than occupation. While the term activity has been used throughout our history, its meaning has become narrow and impoverished. When Mary Reilly was asked what was so magical about the term occupation and why the less confusing concept of activity might not be preferable, she pointed out that occupation implies a commitment to recognizing and serving a deep facet of human nature and that activity was based on no such commitment (48). What she was referring to is that activity was originally used in occupational therapy to signify humans' requirements for occupying their bodies and minds in order to survive and be healthy. The current meaning of activity as primarily a descriptor of occupational therapy media bears little resemblance to its original rich connotations.

The middle-aged, middle-class hemiplegic woman sanding as a bilateral exercise and the emotionally disturbed engineer making a tile trivet are signals that the field's use of therapeutic activity is no longer based on an appreciation for the deep cultural nature of occupation. The application of neurological techniques to children who are bewildered or frightened illustrates too well that we have forgotten that the functional nervous system is inseparable from the mind and its cultural context.

On the other hand, severing the connection of activity from its original nature of humans results in overstated claims that activity can serve every human process and need. Occupation fills a basic human need in life and the therapeutic value of occupation is limited to this same need. There is an important difference between advancing theories about "therapeutic activities" and the traditional hypotheses that human beings have an occupational nature, that normal occupation can be disrupted and threaten health, and that occupation can restore health. The last of those propositions implies an awareness of occupation as a human trait, a human need, and a natural mode of influencing health.

A universal first premise to which occupational therapy can attach its theories is the concept of occupation. That premise acknowledges that body and mind are intimately interrelated and that the person is organized and balanced through interaction with the social environment. As a synthesis of body, mind, and society, occupation is a naturally integrating concept for biological, psychological, and social knowledge.

The concept of occupation also provides a useful filter for occupational therapy knowledge. It delineates which human needs or facets are served. Further, it directs us to select as our unique configuration of theories, those that explain occupation and its health-giving potential.

Through the study of occupation the field has learned and will continue to learn what its importance is for maintaining and restoring health. The heritage of occupation is more than a namesake for a sometimes ambiguous title. It is an important mandate that offers a focus from which to organize the field's theoretical systems.

In summary, occupation can be the central premise for organizing the field's concepts, for identifying the uniqueness of occupational therapy, for maintaining its continuity with its heritage, for filtering what is relevant for the theory base of the field, and for achieving a synthesis of biological, psychological, and social phenomena.

The Integrating Potential of Occupation

To illustrate how occupation can serve as an integrating theme let us examine an important area of knowledge in occupational therapy, the nervous system and its role in function and dysfunction. An overview of concepts and theories concerning the nervous system would suggest that much more attention has been focused on its development as an independent body of knowl-
edge than on its relationship to occupation. In some cases it has been suggested that the theme of occupation is irrelevant to the clinical application of neurologically based concepts (21) and some of present practice reflects such a position. One might conclude that the connection between occupation and the nervous system is tenuous in current theory.

The present view of the nervous system is primarily in morphological and ontogenetic bio-deministic terms. Connecting it to occupation would require viewing the nervous system from a number of new perspectives.

From the perspective of evolution the nervous system is intimate with everyday occupation. Evolution is characterized by a steady decrease in knowledge for survival that is biologically encoded in the human brain with a concomitant increase in storage of that knowledge in the cultural system (49). The brain is thus part of a large bio-social system. Just as social life cannot continue without the neurological infrastructure of human behavior, the physiological processes of the brain depend upon the cultural matrix for their eventual organization (50).

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The evolutionary pathway of human life is not merely the explosion of brain size and complexity, but a delicate coordination of the biosphere and the social sphere. As a result the human infant inherits a plastic nervous system with astonishing capacity for the acquisition of information that is encoded in the culture. The child acquires it through a long process of everyday action and social participation in play. The child acquires the ability to play through early interactions with caretakers and uses it as frame for exploration of self and the world of objects and people. The child's brain is programmed through evolution to develop itself and eventually encode necessary survival information through playing. Without this childhood occupation, deficits in motor behavior, sensory processing, cognitive capacity, problem solving, and social behavior can occur (51-54). Connection of neurodevelopmental theories to the theories of childhood play is thus required. A very promising effort is a paper by Lindquist, Mack, and Parham (55) that begins synthesis of sensory integration concepts and concepts of occupational behavior.

Another exciting perspective is found in the work of the Nobel laureate Roger William Sperry. He decries the predominant tendency in the neurosciences to ignore the role of conscious processes in neurophysiology and suggests that this is both empirically and conceptually wrong (28). Sperry argues that there are mutually causative actions between conscious intention and physiological events in the nervous system and that conscious processes are the ruling hierarchical level. These physiological changes that have intentional or conscious causes are not only ongoing, but also summative or cumulative and result in certain organizational properties in the nervous system.

Other modern writers point out that consciousness is intentional in nature, and always intentional in terms of ongoing purposes and organized actions (56). In humans, meaning and value are the ruling conscious dimensions (57) and are generated through ongoing participation in social reality. These modern concepts support the traditional occupational therapy postulate—meaningful occupation could be used as a means of restoring or enhancing neurological functioning. Consequently, the use of occupations in clinical practice should be recognized as more than a means of providing interesting exercise. Occupations and their cultural meaning are optimal to evoke performance of the nervous system. Those who devalue and eliminate meaningful occupations in physical restoration and neurodevelopmental practice ignore these challenging modern concepts.

Sociopolitical Factors in Theory Development. I perceive two social and political factors that currently influence theory development in occupational therapy: 1. the hiatus between theoreticians and practitioners; and 2. the perception of overwhelming constraints in the current health care system.

One need only refer to the letters to the editor in The American Journal of Occupational Therapy to know that clinicians are often cognizant of, dismayed about, or adamantly in disagreement with what many theoreticians are proposing. Clinicians are concerned that recent theoretical developments—especially the call for return to occupation as a focus for the field—are too idealistic and thus ill suited for the constraints of the current health care system. They argue that such theory is not attuned to the realities of control by physicians, to utilitarian and practical contingencies (such as justifying treatment time), and to external regulation by third-party payers and administrators.
Such concerns seem overly anxious and short sighted. What warrants concern is the apparent fear of making claims about what the field's service is and the tendency to seek security in doing what the medical system apparently wants. It should cause alarm when therapists are intolerant of new ideas (or even old ideas that only seem new because they have been forgotten). There should be great concern when therapists attempt to imitate other professionals who appear to have more status and recognition, rather than proudly declaring a heritage of occupation. These are signs that the field may be rejecting piecemeal; the clinical hypothesis that occupation is health restoring, reformulating a rich and unique form of health care into a cheap imitation.

The health care system is in a period of change. Epistemological and social reformulations of medicine and health care are being offered by leading spokesmen (58-60). The post-industrial health care system (like many other emerging systems) will shift its focus to quality of life and humanistic care (61, 62). The concerns with life itself and with the increase of technological intervention, or without consideration of their ends, will be a thing of the past. In the post-industrial health care system, there will be a high premium on the kind of service occupational therapy has traditionally offered.

Before eschewing occupations, arts and crafts, work programs, and the use of play, art, dance, music, recreation, activities of daily living programs, and the like, the field should carefully ask why, when these modalities were given up as useless or impractical, they are always resurrected as a new form of therapy. One suspects that the viability of occupation as a theme in both the past and current health care system was underestimated.

To establish a role in the changing health care system, theoreticians and clinicians must become partners in the process of building both theory and clinical practice. Mutual alliance is beneficial precisely because of the different vantage points, different perspectives, and different time frames of each. The clinician wants practical solutions to patient problems, and the theoretician wants to know why practical things work. The clinician wants theory to translate into practice, and the theoretician wants practice to be based on theory. The clinician is concerned about that patient coming next Monday and the theoretician must try to anticipate changes that occur in the profession and the health care system over many years. These are complementary, not antagonist, concerns. Theory development will either be helped or hindered by our ability to collaborate in efforts to formulate both theory and practice and its direction of change in coming years.

Conclusion
I was asked to address the nature of theory and its development in occupational therapy with reference to the heritage of occupation. Theoretical development was described as a process guided by philosophical first principles. It was proposed that the history of occupational therapy embodies an unhappy discontinuity with the field's early theoretical premises. It was concluded that the field should recommit itself to fundamental principles of early practice that must become more than an idle philosophy. It was argued that the organizing premise for theory should center on occupation instead of adaptation, development, or activity. Finally, theoreticians and clinicians were urged to identify and rally around their common concerns and together develop the premise that occupation is a health determinant in the context of the changing health care system.

All of these arguments rest, of course, on the veracity of the proposal that it is a good idea to use occupation as therapy. It is said that the test of goodness of any idea is that if it were to die, it would have to be reinvented. It is ironic that the premise of occupation has passed the test. As the field's commitment to occupation was eroded and as clinicians and theorists eschewed their therapeutic occupations, they were reinvented in the form of a whole array of activity therapies. Over and over again as the field narrowed its use of occupations, some other group arose to use them as therapy. With further narrowing of practice, those elements left behind will continue to be reinvented.

I submit that the field exists because occupation has health-giving potential. History has already shown that this idea is important, one that can survive without occupational therapy. I do not think, however, that occupational therapy can survive without it.

REFERENCES