Four or five decades ago, volition, or will, was rejected as a respectable and meaningful concept in the field of psychology. The rejection created a vacuum which has never been adequately filled by other concepts. Miller and his associates (1960, pp. 11-12) have made note of the problem:

Our point is that many psychologists...have been disturbed by a theoretical vacuum between cognition and action...No doubt it is perfectly clear to the reader that we have here a modern version of an ancient puzzle. At an earlier date we might have introduced the topic directly by announcing that we intended to discuss the will. But today the will seems to have disappeared from psychological theory (1960, p. 11).

Intention went out of style as a psychological concept when reflex theory and its derivatives became the foundation for our scientific theories of behavior (1960, p. 60).

Going out of style was inevitable because intention and volition were thought to be incompatible with models of psychological inquiry based
on the mechanistic and reductionistic notion that man can be studied, very much like a machine, by taking apart the components which make up that machine, thereby gaining some concept of its totality. Herein lies the assumption that behavior of even the most complex kind can be understood by reducing it to the simple accumulation of elements which comprise it along with the reflex habits that are programmed into the central nervous system as the result of past experiences and their reinforcement. The wholesale adoption of mechanism is understandable since, as we have noted, reductionism as a methodology has been successful when applied to other fields such as physics and chemistry. According to a mechanistic model, a person's actions should be totally predictable in terms of reflexes and variants of those reflexes, and should be directly traceable to the unique characteristics of the external stimulus conditions. What flows in through one's sensory receptors flows out as some form of predictable behavior based upon the characteristics of what flowed in. Sensory data alone, however, are inadequate to explain even the simplest forms of human behavior. The vast number of complex interchanges occurring

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1 Scientists have now come to realize that even a machine can't be understood apart from the purpose the designer had in mind when inventing it because the operational principles of a machine are derived from its purpose and not from some inherent quality in its parts. Polanyi (1958) makes the point: "The first thing to realize is that a knowledge of physics and chemistry would in itself not enable us to recognize a machine." Scientists can describe the parts of a clock, for instance, "in every particular, and in addition will predict all its future configurations. Yet they will never be able to tell us that it is a clock. The complete knowledge of a machine as an object tells us nothing about it as a machine." We must know its purpose first and the operational principles derived from that purpose. Thus the reality of the machine cannot be grasped apart from its purpose; the purpose of something represents its characteristic power.

2 Thomas Ryan's book (1970) is devoted to a detailed explanation of why SR Theory is inadequate to account for human behavior and why the notion of intention and purpose cannot be dispensed with.
within the organism between stimulus and response are related to the "meaning" aspect of human activity without which we cannot understand human behavior. Central to those activities within the organism that occur between stimulus and response is purpose -- a necessary characteristic of any human activity. Whitehead holds that purpose is an element of causality just as physical forces or genetic inheritance are part of causality: "the conduct of human affairs is entirely dominated by our recognition of foresight determining purpose, and issuing in conduct." For scientists to ignore this evidence of purpose is considered by Whitehead to be "a colossal example of anti-empirical dogmatism arising from a successful methodology (Eisendrath, 1970). Whitehead's cosmology relies extensively on the notion of purpose as a vital element in the constitution of reality. He refers to purpose as an aspect of subjective aim, which guides and directs the process of concrescence. The function of purpose as an expression of subjective will is implicit in our very existence. It is a higher-order operation that gives man greater choices within a wider boundary of situations and enables him to be transcendent by projecting himself beyond the limitations of the present moment. A simultaneous fusion of past and present with the future -- an incorporation of purpose, ideals and aspirations into the immediate situation -- creates the condition of transcendence and enables the subject to leap beyond, to become liberated from, that immediate

1Charles Taylor (1964) makes the point that all descriptions of behavior by scientists contain teleological or purposive elements and that there is no way of avoiding it.
situation. It is through the operation of purposive experience, the bringing to bear of one's sense of purpose upon the immediate situation, that underlies the act of volition. We therefore define volitional competence as the capacity to form ultimate aims at the leading edge of one's life, the infusion of purpose into the perpetual flow of experience expressed in operable goals and intentions which determine action. Will or intention is implicit in action. Lewis states the case:

All acts have in common the character of being intended or willed. But one act is distinguishable from another by the content of it, the expected result of it, which is here spoken of as its intent. There is no obvious way in which we can say what act it is which is thought of or is done except by specifying this intent of it (Lewis, 1946, p. 367).

Functionally, then, volition is inherent in a sense of purpose derived from ultimate concerns and is translated into operable goals or intentions expressable through some form of action.

We have identified several processes germane to learning competence which are central to the development of volitional competence. Following are brief descriptions of these volitional processes.

Attention -- William James succinctly defines the essence of will as action following vision. In so doing he implicates the purposive control of attention as the central process underlying volition. He writes, "attention is the first and fundamental thing in volition. The essential achievement of the will in short... is to attend to a difficult object and hold it fast before the mind" (James, 1890). We might at
first feel apt to dismiss James' account as naive and uninformative and excuse it as an artifact of a pre-scientific psychology. But some 70 years later Rollo May was to concede:

. . .when we analyze will with all the tools modern psycho-analysis brings us we shall find ourselves pushed back to the level of attention or intention as the seat of the will. The effort which goes into the exercise of will is really effort of attention; the strain in willing is the effort to keep the consciousness clear, i.e., the strain of keeping the attention focussed (May, 1969, p. 220).

We are inclined to agree with this view. Regardless of which way we approach it attention appears to be a prerequisite to all other volitional processes.

The research literature abounds with various definitions and models of attention but there has been relatively little effort directed towards understanding how these various approaches might interrelate to yield a broader and more complete perspective. After a careful and extensive review of the literature we assembled what seemed to be a working definition sufficiently coherent and comprehensive to integrate the diverse views. In brief, we define attention as the process by which an individual purposively selects (differentiates) and constructs (integrates) the sensory and conceptual data of his immediate present into a unity of conscious experience. It is worth re-emphasizing that purpose is the fundamental element continually underlying the coherence and direction of this process. As a process, attention depends upon the continual penetration and transformation of the subjective environment,
the advance of consciousness into novel realms. Research demonstrates that if this condition of flux and transition stalls, if the interaction between subject and data subsides into stasis, attention will disintegrate. This fact holds some far-reaching implications for the organization and content of school curricula. There is substantial evidence that without attention many forms of complex learning either cannot take place at all or else proceed very inefficiently; yet, we continue to subject children to passive, inert conditions, reducing both their capacity to attend and their will to learn. Educational experiences should be designed to foster the type of interaction between the child and his environment which leads to the vital experience of penetration and adventure -- the creative advance into novelty. Once attention, the primary phase of purposive activity, begins to emerge, the stage is set for goal setting.

Goal setting -- This is the process of anticipating and organizing one's future by making a conscious decision about future events or conditions toward which one will strive. It is one thing to have vague aspirations; it is quite another to translate them into operable terms so that these aims might become actualized. Thus goal-setting requires one to bring into clear figure alternative courses of action by which the desired goal may be realized, project the consequences, and evaluate the feasibility of the remaining alternatives. Once the priorities of the latter have been established it remains for one to integrate them into a coherent plan of action. Finally the individual must decide
upon and commit himself to the plan of action. This act of decision and commitment is most crucial -- without it, a person's intentions and plans are ineffectual. It requires faith and confidence both in the correctness of the goal and in one's ability to achieve it. On another level, it means actively refusing to entertain other plans until either the goal is achieved or unforeseen consequences make it apparent that achievement is either impossible or undesirable.

We have been describing in general terms the various operations involved in the goal-setting process as if the content were irrelevant. But this is not the case. Process is meaningless without content as is content without process. Thus, there are several important qualitative aspects of goal-setting we should keep in mind.

First, competent goal-setting should lead the individual toward the release of his potentiality at an optimum rate. Secondly, one's goals should provide a degree of novelty and challenge to the organism. And finally, one's goals should avoid leading to destructive results for others as well as oneself. This implies that biological, psychological, and spiritual needs should be taken into consideration when goals are set.

Research has demonstrated that setting goals has a definite effect on achievement. It is known, for example, that people who set goals achieve more, and that there is a direct positive relation between the specificity of the goal and the individual's ultimate performance with respect to it. Studies documenting this have shown that even in cases where very specific though difficult goals are set, a higher
level of performance results than when the goal is articulated in vague terms such as "do your best".

**Will** -- Will is the process of bringing a goal into fruition, the realization of intention in action. The component subprocesses of will are self-arousal, perseverance, and effecting closure.

**Self-arousal** refers to the ability to move oneself from a state of rest to action -- making a beginning. The complement or reciprocal to this function is self-restraint which involves inhibiting a tendency or impulse to act -- to forebear action toward a particular end which is at variance with one's ultimate aims and well-being.

**Perseverance** is the process of maintaining appropriate efforts toward the actualization or integration of some consciously adopted goal or intention when resistance is encountered. In any situation where one's aspirations bring one to the frontier of his knowledge or development, the actualization of potential often requires sustaining an intense degree of effort on a continual basis. However, it is precisely when one is pressing upon these frontiers of being that he is most intensely engaged in the act of becoming. Thus, perseverance plays a vital role in those levels of learning maximally involved in the release of human potential. Accordingly, from a Whiteheadian perspective, perseverance may be conceived of as the pressing force of purpose on the threshold of novelty. As the maintaining phase of purpose, it implies an apprehension of personal efficacy upon one's future, i.e., a sense of expectancy and control. Its intensity depends upon the strength of
the underlying intention and the extent to which one is able to attend or focus upon the circumscribed aspects of the situation relevant to the particular activity.

It is important that any conception of perseverance, or any volitional process for that matter, be firmly based upon its organic nature as a process inextricably related to the total process of actualization. To attempt to understand it by abstracting and isolating the notion from this context is to completely lose sight of its meaning. It should also be clear at this point that the concept of perseverance simply cannot be reduced to any characteristic behavioral pattern without resulting in triviality. For example, perseverance does not mean mere repetition or rote activity. In some cases it may involve giving up or yielding one course of action in order to try another approach to the same problem. Or it may mean stopping altogether -- acquiescing -- when further pursuit of an activity appears to be futile or destructive to one's ultimate aim.

Effecting closure means bringing intentions to successful consummation -- completing or resolving the task at hand. People totally lacking in this capacity are unable to bring a sense of wholeness and integrity to their encounters with life because their efforts are fragmented. Consequently their capacity to meet the challenges of growth and achieve self-determination are severely impaired.
Fantasy -- Several paragraphs earlier we suggested that attention is at the basis of every volitional process. One way in which attention underlies and sustains will is in the form of fantasy. Fantasy is merely a mode of attention in which the data are potential rather than actual. Being able to fantasize or project oneself into the intended situation energizes and motivates one to action. As James pointed out, if an exciting idea is brought into the focus of attention, unobstructed, action will automatically follow.

In summary, it is our contention that volition is a vital process underlying the release of human potential and therefore must become a central concern within any educational model that takes seriously the task of fostering the creative growth of the full range of capacities folded within every human being. Mankind now has the technological power to shape dramatically his environment. We cannot relegate the evolution of his individual and collective existence simply to the external conditions impinging upon him. Man is a purposive being and his sense of purpose is the primary element which enables him to shape his future. The ability to move forward rests on his ability to transcend the present. Purpose and will, the basis of this transcendence represents at once the fulfillment of the present by going beyond it. It is, in essence, the creative advance into novelty.
REFERENCES


