ONTOLOGICAL ACCELERATION AND HUMAN AGENCY

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In 'Ontological Acceleration,' Kelly described human evolution as a continuing process that remains actively in transition and suggested that we view human behavior itself as an example of this evolutionary process. Bandura's Social Cognitive Theory (SCT) presents an intriguingly parallel view emphasizing human agency as a central factor in a coevolutionary process. Both Personal Construct Psychology (PCP) and SCT emphasize the proactive role of humans in establishing views of the future, anticipating and assessing outcomes, and managing and guiding goal-directed actions. This paper describes some of these parallels and proposes ways that these approaches might mutually inform and elaborate each other in these convivial views.

KELLY, 'ONTOLOGICAL ACCELERATION,' AND HUMAN EVOLUTION

I have long found Kelly's (1979a) paper 'Ontological Acceleration' among his most fertile and provocative works. I have read it many times, and although I will not attempt to summarize all of the rich and varied ideas he presented in this paper, I can describe my perspective on some of the propositions that have continued to intrigue me. Followers of Kelly know that he emphasized the anticipatory nature of human behavior. In 'Ontological Acceleration' he substantially elaborated that emphasis by describing human activity as an active, participating contributor to on-going human evolution. He contrasted his perspective with what he saw as a contemporary view of Darwinism, which suggested that evolution had 'run its course,' implying that we can now study the final results, enabling us ultimately to predict and control behavior.

This perspective on evolution, perhaps not too different from some current evolutionary psychology views, seems to suggest that we can look to the past, in this case the "contingencies of survival" that have led to the evolution of particular species characteristics, to explain current behavior. Kelly described how this view leads to a past-oriented sequential explanation of behavior, whether from a behaviorist (stimulus-response-reinforcement) or psychoanalytic (un-conscious motives) perspective. Since the past has led to the present, we should be able to nail down the causes of current action by looking at the past.

Kelly, as you might expect, tended to look at the situation in his fresh, unique way. Rather than seeing a person's response or behavior as the psychologist's dependent variable, the outcome of past causes, which assumes regularity of relations between antecedent events and behavior, Kelly encouraged us to view behavior as the person's independent variable, a method used to pose questions and change those very circumstances that we thought determined what the person would do.

Kelly rejected the perspective that 'evolution has run its course': "Human behavior is itself an evolutionary process" (1979a, p. 23). He suggested that human behavior has not become solidified and routine, that it remains actively in transition, "…perhaps transforming itself at a pace no other aspect of nature has ever matched" (1979a, p. 23). 'Human nature' does not stand still long enough for the psychologist to nail it down and determine its parameters; rather, it continues to unfold itself in new and creative ways. Kelly suggested that psychologists should join and participate in this unfolding rather than attempting to explain behavior in terms of the repetition of prior patterns.

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This does not mean that Kelly had no interest in prediction and control. In fact, he was extremely interested, as a psychologist, in prediction and control. However, for him that meant, rather than seeking to predict and control others, seeing human behavior itself as a process of prediction and control. He wanted to know what the individual wished to predict or anticipate, what guidelines or channels (i.e., constructs) the person used for this process, what alternatives the person saw available, and how human behavior changes the environment. He proposed that we cannot determine the meaning of behavior until we see the outcomes of this active participation, and this process continues to evolve as failures to predict effectively lead to reassessment and revision of the tentative guidelines, and even confirmed predictions only yield "tentative evidence that one may be on the track of something" (1979a, p. 39) rather than firm and final conclusions.

Focus on Kelly's suggestion that we view human behavior and human nature as still very actively evolving and that sequential explanation of that behavior requires looking not only at the past but also at the future, in terms of the individual's anticipations and constructions. I would like to elaborate on these ideas and some of their implications for psychology in general and PCP in particular by indulging myself in one of my habitual tendencies: articulating connections, compatibilities, similarities, and potential synergies between Kellian and constructivist views and other perspectives that I view as convivial.

I do this in the context of this conference collection with some trepidation, remembering that two of my early PCP congress papers, which I still think were relatively good (McWilliams, 1979; McWilliams, 1983), did not get selected for inclusion in the congress book partly because the editors perceived them as devoting too much coverage to concepts from theories other than PCP. I should have learned something from that experience, but I seem to have once more slipped into my old habit of reading something new and saying to myself, 'that sounds very similar to something that Kelly said, and I think there's some compatibility there that might be interesting, so let's take a look at it.' I hope that members of the PCP community will find this potentially heretical approach at least tolerable and, ideally, might find something of interest too.

BANDURA'S SOCIAL COGNITIVE THEORY

In 2006, I happened to pick up an issue of the new APS journal *Perspectives on Psychological Science*, and read an article by Albert Bandura (2006a) describing a psychology of human agency. I have known of Bandura's work for more than forty years, having my first exposure to his early studies on social learning (Bandura & Walters, 1963) in an undergraduate course, and as I read this article I found myself responding to several of his current points in terms of my 'synergy' and 'conviviality' tendencies. His view of human evolution and human agency reminded me of Kelly's perspective in 'Ontological Acceleration' and struck me as closely related to Kelly's emphasis on anticipation, prediction, and construct revision. This led me to review some other of Bandura's recent works (1994; 1999; 2001; 2002; 2005; 2006b) to see whether this initial impression held up. Indeed, it has (otherwise I would have abandoned the idea and would be writing about something else), so I decided to explore it and see what I could learn.

My goal in this presentation is to describe some of the elements of Bandura's theory of Human Agency that seem most relevant to Kelly's notions of human evolution and orientation toward anticipating the future. I approach the daunting task of summarizing major elements of SCT with the same trepidation that I felt in summarizing Kelly's ideas, and, once more, I will emphasize those ideas and concepts that appear most relevant to the conviviality between the two approaches and the theme of this paper.

Bandura and evolution

Bandura's perspective on evolution closely parallels Kelly's rejection of the 'evolution has run its course' point of view, and builds on recent work in evolutionary psychology that occurred following Kelly's death. Similarly to Kelly, Bandura rejects what he describes as 'one-sided evolutionism' which sees evolution as having

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shaped behavior but ignores the continuing evolutionary process and its relation to human innovation. He supports a "bidirectional view of evolutionary processes" (2001, p. 20) that emphasizes how evolutionary pressures fostered qualities that enable humans to develop tools and alter their environments, leading to new selection pressures which supported the development of cognitive capabilities, language, thought, symbolic communication, and the construction of social and cultural environments. Within a major construct dimension of the evolutionary psychology debate, Bandura sides with Gould's 'loose leash' or 'biological potentialist' view of the effect of biology on culture that emphasizes human possibilities, contrasted with Wilson's 'tight leash' or 'biological determinist' perspective that emphasizes inherited constraints and limits. In the context of 'Ontological Acceleration', we can imagine that Kelly might well have resonated with Bandura's (2001) statement:

> *…(H)human lifestyles are, in large part, experientially fashioned within biological limits rather than come ready made. The exercise of agentic capabilities is a prime player in the human coevolution process. People are not only reactors to selection pressures, but they are producers of new ones at an increasingly dizzying pace. …As people devise ever more powerful technologies that enable them to fashion some aspects of their nature, the psychosocial side of coevolution is gaining ascendancy. Thus, through agentic genetic engineering, humans are becoming major agents of their own evolution, for better or worse.* (p. 22)

Human agency

Bandura's view of human agency emphasizes how people exercise control over their lives and can be viewed as producers of the world in which they live as well as products of it. Like Kelly, Bandura emphasizes an explanation of behavior that focuses not only on the effect of past circumstances on present behavior, but also on its purposive, constructive, anticipatory nature. To succeed in the complex world people must anticipate the effects of various actions and events, determine their capabilities, analyze opportunities and constraints, and regulate their actions. Their beliefs represent a model of the world that they use as a guide in achieving desired outcomes and avoiding undesirable consequences. Bandura views people as purposive beings who act to bring about desired events rather than simply responding to situational forces and personality structures. Bandura said, in terms that could have just as easily been penned by Kelly, "In experimental situations, participants try to figure out what is wanted of them; they construct hypotheses and reflectively test their adequacy by evaluating the results of their actions; they set personal goals and otherwise motivate themselves…" (2001, p. 5). In his discussion of human agency, Bandura describes many of the process of the active personal scientist metaphor that Kelly so effectively articulated.

Bandura elaborates human agency, what to him being human means, by articulating its four core features: intentionality, forethought, self-reactiveness, and self-reflectiveness. Additionally, Bandura views the implementation of human agency as taking different forms: personal agency, proxy agency, and collective agency. Finally, Bandura describes the important concept of perceived self-efficacy, referring to individuals' assessment of their ability to succeed in the actions relevant to implementing human agency. I will briefly summarize each of these components.

Intentionality. Human agency refers to intentional acts, a representation of a course of action cast into the future with a commitment to bringing events about. Humans originate actions, and develop plans to execute them. In the same way that Kelly described anticipation in terms of general dimensions, Bandura describes future-directed plans as not specified fully at the beginning, since we cannot anticipate all of the details of a situation, and often respond to fortuitous events. Like the social constructionists, Bandura emphasizes that most human activities involve participation with others in joint activities requiring shared intentions and the coordination of individual action plans.

Forethought. Shotter (2007) discussed Kelly's emphasis on time and the sequential un-

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folding of events and actions. Bandura's emphasis on forethought echoes this emphasis on a future time perspective and the extension of human agency in time. In setting goals, anticipating the possible consequences of alternate actions, and creating actions likely to lead to desirable outcomes, people actively anticipate the future, and use that forethought to provide direction, meaning, and coherence. By representing future events cognitively, people construct expectations and goals, and projected outcomes serve to motivate and regulate behavior.

Self-Reactiveness. Having intentions and anticipating future events do not, by themselves, make things happen. Once people commit to an intention and adopt a plan of action they must take a specific course of action and monitor and regulate their execution of their plan, assessing their performance in terms of personally meaningful criteria, and taking necessary corrective actions. They compare their actual performance with goals that have meaning within their personal value (construct) system and provide purpose and direction.

Self-Reflectiveness. Like good 'personal scientists', people must assess their functioning and the adequacy of their behavior, evaluating their pursuits and values, and addressing conflicts. Personal agency and personal effectiveness rest on people's assessment of their ability to exercise effective control over themselves and the events in their environment. Since this aspect of human agency, perceived self-efficacy, has a central role in Bandura's SCT, it requires further explication below.

Modes of Agency. As stated above, Bandura distinguishes three forms through which human agency takes place: personal, proxy, and collective. Most of our psychological analyses focus on how individuals exercise their personal agency and effectiveness individually. People regularly exercise personal agency, through its associated cognitive, motivational, and choice processes, in order to produce desirable effects in their lives. In many instances, however, people do not have direct control over situations that affect them on a daily basis, and in other situations people perceive that they may not have the necessary skills or they do not wish to burden themselves with direct control. In such instances, people use human agency to get others to act to obtain the outcomes they desire. For example, although I have some of the skills necessary to maintain my home landscaping, I choose to hire a professional gardener to care for the yard, both because of his greater skill and my lack of desire to do the work (i.e., been there, done that). Many other human goals require interdependent social actions that require coordination with others. SCT views human functioning as embedded in social systems, with personal agency occurring within a context of social and cultural influences. People act conjointly on the basis of shared beliefs, including their collective ability to produce desirable consequences, a conception elaborated by social constructionists. Current efforts at energy conservation and reducing global warming represent a good example of collective human agency.

Self-Efficacy. Bandura (1999) defines perceived self-efficacy as "people's beliefs in their capabilities to perform in ways that give them some control over events that affect their lives" (p. 181). Self-efficacy serves as a basic foundation for human agency, since people have incentive to act if they believe they can produce desirable results through their behavior. People construct their self-efficacy beliefs through various processes, including direct experience of personal mastery, vicarious experiences observing similar people succeeding, persuasion by others, and their assessment of their physical and emotional states and capabilities. Many personal, social, and environmental factors influence how people perceive, reflect upon, and interpret experiences and how they integrate them into their sense of self-efficacy. Self-efficacy is also affected by what information people attend to, influenced by their perceptual biases and other personal and situational variables, and how people integrate that information into their perception of their capabilities. Efficacy beliefs influence how people perceive events, how motivated they are to perform actions, how they cope with threat, anxiety and demands, and whether they set realistic and appropriate goals.

Bandura's work demonstrates that perceived self-efficacy can have a major influence on human effectiveness and well-being. Those with high levels of perceived self-efficacy demonstrate greater cognitive resourcefulness, effectiveness in dealing with their environments, and

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greater flexibility. They set appropriate challenges, focus on worthwhile opportunities, and imagine successful actions that they use to guide their behavior. They attribute failure to inadequate strategies or insufficient effort, and when faced with obstacles they increase their effort and construct better strategies. They view threats without distress, reduce anxiety by effectively addressing threatening situations and altering the environment in positive ways. They see difficulties as something to master rather than avoid, set appropriate goals, and sustain their commitments. By focusing on successful performance, attributing failure to remediable factors such as lack of skill, poor strategies, or insufficient effort, they recover their self-efficacy following failures.

Those with low levels of self-efficacy imagine actions that will fail, hamper their effectiveness by focusing on what might go wrong, and dwell on risks rather than opportunities. They tend to ascribe their failures to low ability, circumstances, or "luck," and when faced with obstacles they reduce their effort, give up, or accept a lower-level outcome. They view threats with anxiety, dwell on their deficiencies, see danger and risk, and impair their functioning by creating distress. They avoid difficult tasks, maintain low aspirations, experience self-doubts, focus on obstacles, and do not recover well following failure. They thus remain vulnerable to stress, anxiety, and depression.

SOCIAL COGNITIVE THEORY AND PERSONAL CONSTRUCT PSYCHOLOGY

This review of major SCT concepts related to human agency should, I hope, demonstrate its compatibility with the PCP perspective, including the emphasis on understanding people's psychological processes in terms of how they go about anticipating events, and the personal scientist metaphor that focuses on various steps and processes involved in articulating goals, implementing experiments, and revising understanding. However, I can well imagine at this point that some members of the PCP community may still wonder why PCP psychologists should care about SCT and what relevance Bandura's theory might have for Personal Construct Psychology.

Since we don't ordinarily include Bandura's SCT among constructivist theories, we may still question the compatibility of his perspective with constructivism in general and PCP in particular, so let me explore the issue a little further.

I note a number of similarities between Bandura and Kelly personally, in terms of their early life and its impact on their approach to psychology and their career interests. Both grew up in the North American Great Plains (Bandura in Alberta, Kelly in Kansas), which they both emphasized as an environment that required people to make something of their circumstances. For example, Bandura (2006b) described how the austere environment supported using one's "agentic capabilities for constructing most of one's life environment," and stating explicitly that "constructionism was a vital lifestyle, not an abstract psychological theory" in his life (p. 44). Both developed comprehensive theories of personality emphasizing the active role of the person in making something of their experience, and both turned their theories toward global issues later in their careers (Bandura, 2008; Kelly, 1962).

One possible objection that constructivists might have to this connection stems from the view that Bandura's work originated in a behavioral perspective. This could suggest a more sequential, deterministic view of human undertakings incompatible with Kelly's perspective. However, Bandura's career work (2005, 2006b) demonstrates that he has long taken a more proactive view of human behavior as his theory has evolved into a well elaborated model that he came to call Social Cognitive Theory (SCT), differentiating his theory from other social learning approaches.

Fortuitously, I had the opportunity to ask Bandura directly about his view of the compatibility of his and Kelly's perspectives (A. Bandura, personal communication, April 12, 2008). Bandura expressed great respect for Kelly, his theory, and the daring foresight of his perspective, and he stated that he saw "no incompatibility at the meta-level" between their points of view. Bandura did express the importance of conducting continuing research to work out the particular details of how to improve self-efficacy, or, to use PCP terminology, to help

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people to implement effective anticipatory processes.

Not wanting to take the risk of once again devoting so much more coverage to Bandura's ideas than Kelly's (and further risk rejection of the manuscript for publication), I shall now return to the Personal Construct Perspective and attempt to address 1) how ideas and concepts from SCT could contribute to the elaboration and application of PCP, 2) how PCP concepts might contribute to the elaboration and application of SCT, and 3) the synergy of the two perspectives within the larger context of contemporary psychology and its future.

Might SCT concepts contribute to the evolution of PCP?

I approach the question of how an exploration of some components of Social Cognitive Theory's emphasis on human agency could enhance, inform, or extend Personal Construct Psychology from a firm foundation of Kelly's formal PCP theory, including the fundamental postulate, emphasizing understanding a person's psychological processes as organized in terms of how that individual anticipates events, and the eleven elaborative corollaries. I also place Kelly's personal scientist metaphor squarely at the center of this analysis. Finally, I would like to build on the implications of Kelly's ideas about the continuing evolution and effectiveness of human life as stated in 'Ontological Acceleration.'

From this foundation, it seems to me that the process of facilitating human effectiveness from a PCP perspective, whether in psychotherapy (what Kelly referred to as 'the psychological reconstruction of life'), education, industry, social action, or other realms, focuses on the same fundamental processes. The psychologist wishes to help people to undertake effective action in the pursuit of desirable outcomes by addressing their values and goals, articulating their beliefs about the nature of relevant phenomena, identifying the outcomes they wish to attain, constructing appropriate strategies, skills, and actions necessary to furthering the goals, monitoring the process as it occurs, addressing failure and setback, revising original beliefs and strategies, and ultimately assessing whether the antic-

ipated outcome has been attained and what comes next.

Shotter (2007) described Kelly's (and Don Bannister's) emphasis on the importance of "creating a psychology of *human concern*, a psychology that dealt with issues that matter" (p.73, italics in original), and he articulated this undeveloped or unfinished nature of the implications of Kelly's work. He urged us to focus on the consequences of human activity within the social context and to assist people in changing their everyday practices by "inserting or intertwining new reflective and critical practices into our already existing daily practices" (p.74).

These activities, approached from fully within the orthodox PCP perspective, could progress by consciously attending to processes involved in clarifying intentions and desires; articulating elements of forethought such as goal setting, foreseeing consequences, and creating courses of action; motivating and regulating behavior, including addressing emotions as well as cognition and action; and reflecting on and examining the effectiveness of actions. We might also enhance human effectiveness by analyzing the relative value of reliance on personal, proxy, and collective modes as ways of maximally meeting anticipated outcomes. The emphasis on the individual's perceived self efficacy seems most specifically relevant to the PCP approach. We might elaborate the application of the Kellian personal scientist methodology by focusing directly on the various components of self-efficacy, assisting people in assessing their skills and competency effectively, addressing reachable goals, viewing failure in terms of effort and competencies rather than global personal attributions or chance, and developing effective approaches to learning from failure and persisting.

Might PCP concepts contribute to the evolution of SCT?

I believe that PCP has much to offer to the further elaboration and implementation of many aspects of the SCT approach to human effectiveness. Bandura's view of human agency emphasizes the ever-evolving nature of the human undertaking and the necessity of effective articula-

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tion of beliefs and understanding, setting appropriate goals and directions, developing specific behavioral strategies, attending to outcomes and consequences, revising strategies and beliefs, etc. Bandura emphasizes the central importance of high perceived self-efficacy in human effectiveness. He distinguishes between self-esteem, a global sense of self-worth, and self efficacy, which addresses the specific likelihood of producing specific outcomes through actions. Enhancing self-efficacy thus occurs through helping the individual to practice more effective "personal science." The processes of building the elements of self-efficacy as described by Bandura map directly to Kelly's description of the parallels between his role as a graduate thesis director and as a psychotherapist. In both roles, Kelly said,

> *I would try to get him to pinpoint the issues, to observe, to become intimate with the problem, to form hypotheses, to make test runs, to relate outcomes to anticipations, to control his ventures so that he will know what led to what, to generalize cautiously, and to revise his dogma in the light of experience* (1979b, p. 61).

We can view each of these elements as directly related to the process of building a sense of self-efficacy. Psychologists working within the PCP perspective, building on Kelly's example, have developed a variety of methods and techniques relevant to these processes, including various repertory grid methods, a variety of approaches to change and reconstruction, and applications in education, organizations, social and political contexts, and beyond (e.g., Fransella, 2003).

SYNERGY AND ONTOLOGICAL ACCELERATION

I would like to conclude by addressing the potential synergy between these two approaches in the context of some current aspirations and issues within the Personal Construct Psychology community. Neimeyer and Neimeyer discussed the flexibility and continuing advancement of Personal Construct Psychology, stating that "… its capacity to enter into transformative dialog

with other streams of social and scientific discourse, strikes us as its greatest strength" (2002, p. vii). Kelly often stated that human understanding does not owe allegiance to any particular theory or interpretation, and that we should use any methods or techniques that help us to further the process of understanding our subject. Kelly applied his own philosophical assumption of constructive alternativism to his theory, seeing it as a tentative and interim way to view phenomena, recognizing that we should view all ideas as subject to revision and replacement.

Kelly's and Bandura's similar views of the active role of human beings in their continuing evolution emphasize the importance of psychology's participation in this on-going process of human evolution. As Kelly put it, "Behavior is man's independent variable in the experiment of creating his own existence. . . . psychology's greater task is to join mankind in the exploration of what human behavior might be, and what would happen if it were" (1979a, p. 36). This view supports the proposition that we should focus on using our skills and ideas to further our knowledge and understanding of the human situation and that working with convivial perspectives can augment that process. Additionally, our interest in continuing to enhance the recognition and acceptance of PCP within the wider discipline could benefit in part from applying what we have to offer to other recognized models, as well as specifically within the PCP perspective. By doing so, perhaps we can further enhance the collective self-efficacy of the Personal Construct Psychology community and participate even more fully in our continuing contribution to the acceleration of human evolution.

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