

Date: Wed, 13 Oct 1999 19:49:26 -0700
From: Phil Runkel on 13 October 1999:
Subject: Powers
To: CSGNET@POSTOFFICE.CSO.UIUC.EDU

Dear Bill:

In a moment of musing on the fragility of life, it occurred to me that I had set down my admiration, respect, and affection for you in only two published places, both of which were constrained by narrow purposes. And I do not want one of us to expire before I have set down in some public place some further testimonial. Therefore this.

As you know, I have been reading your writings and those of your followers since 1985. I have told you before how, as I strove to understand your view of perception and action, I found my own accustomed views undergoing wrenching, unsettling, unhinging, even frightening changes. I found myself having to disown hundreds, maybe thousands of pages which at one time I had broadcast to my peers with pride. I found, too, that as my new understanding grew, my previous confusions about psychological method, previously a gallimaufry of embarrassments, began to take on an orderliness. Some simply vanished, as chimeras are wont to do. Others lost their crippling effects when I saw how the various methods could be assigned their proper uses -- this is what I wrote about in "Casting Nets." For me, the sword that cut the Gordian knot -- my tangle of methodological embarrassments -- was the distinction between counting instances of acts, on the one hand, and making a tangible, working model of individual functioning, on the other. That idea, which in retrospect seems a simple one, was enough to dissipate (after some months of emotion-fraught reorganization of some cherished principles and system concepts) about 30 years of daily dissatisfaction with mainstream methods of psychological research.

The idea that permits making tangible, working models is, of course, the negative feedback loop. And that, in turn, requires abandoning the almost universally unquestioned assumption by most people, including psychologists, of straight-line causation -- which, in turn, includes the conceptions of beginning and ending. Displacing that theoretical baggage, the negative feedback loop requires circular causation, with every function in the loop performing as both cause and effect. That, in turn, implies continuous functioning (beginnings and endings are relegated to the convenience of perception at the fifth level). One cannot have it both ways. Living creatures do not loop on Mondays and straight-line on Tuesdays. They do not turn the page with loops while reading the print in linear cause-to-effect episodes. William of Occam would not approve.

The loop, too, is a simple idea. I don't say it is easy to grasp. I remember the difficulty I had with it in 1985. I mean it is a simple idea once you can feel the simultaneity of its functioning.

You did not invent the loop. It existed in a few mechanical devices in antiquity, and came to engineering fruition when electrical devices became common. Some psychologists even wrote about "feedback." But the manner in which living organisms make use of the feedback loop -- or I could say the manner in which the feedback loop enabled living creatures to come into being -- that insight is yours alone. That insight by itself should be sufficient to put you down on the pages of the history books as the founder of the science of psychology. I am sure you know that I am not, in that sentence, speaking in hyperbole, but in the straightforward, common meanings of the words. In a decade or two, I think, historians of psychology will be naming the year 1960 (when your two articles appeared in Perceptual and Motor Skills) as the beginning of the modern era. Maybe the historians will call it the Great Divide. The period before 1960 will be treated much as historians of chemistry treat the period before Lavoisier brought quantification to that science.

Using the negative feedback loop as the building-block of your theory also enabled you to show how mathematics could be used in psychological theorizing. (I spent a few years, long ago, reading here and there in the journals of mathematical psychology. I found that most articles were actually dealing with statistics.) Your true use of numbers has made it possible at last to test theory by the quantitative degree of approach, in the behavior of each individual, to the limits of measurement error, as in other sciences. This incorporation of mathematical theorizing was another of your contributions to the discipline.

But even making a science possible was not enough to fill the compass of your vision. You saw the unity of all aspects of human perception and action. You saw that there was not a sensory psychology over here, a cognitive over there, a personality in this direction, a social in that, and so on, but simply a psychology. You gathered every previous fragment into one grand theoretical structure -- the neural hierarchy. As you say, the nature of the particular levels is not crucial. What is crucial is the enabling effect of organization by levels -- the enabling of coordination among actions of all kinds. Previously disparate psychologies with disparate theories can now all begin with the same core of theoretical assumptions. Though it will take a long time to invent ways of testing the functioning of the hierarchy at the higher levels, I find it exhilarating to realize that you and others have already built models having two or three levels organized in the manner of hierarchical control and that the models actually work.

The neural hierarchy is far more than a listing of nice-sounding categories. The theory itself tells how we can recognize the relatively higher and lower placements of levels. It tells us, too, some of the kinds of difficulties to be anticipated in doing research at the higher levels. That kind of help from early theory is a remarkable achievement.

For any one of those three momentous insights, I think you deserve a bronze statue in the town square. To put all three together in one grand system concept is the kind of thing that happens in a scientific field once in a century or so. I am lucky to be alive when it is happening. How lucky I was in 1978 to have my hands on the *Psychological Review*, volume 85, number 5!

I do not want to give the impression that I think I have acquired a deep understanding of PCT. After 15 years of reading, conversing, writing, and thinking about PCT almost every day, I still feel the way Lewis and Clark must have felt when they began rowing their boats up the Missouri River. I know the general nature of the territory, but I know that much of what I will come upon will be astonishing and baffling, and I know that every mile of the journey will be hard going. As I work on the book I am writing, much of which will be elaborations of the three simple ideas I set out above, I find time and again that I must take an hour or a day to struggle with ways of keeping the words as simple as the idea. The ramifications of those simple ideas are multifarious, intertwined, and subtle. As I set forth to describe a complication in the way those ideas work together, I find now and again that I have opened further regions of complexity for which I am wholly unprepared. Then I must take an hour or a day or a week to find my way back to firm footing. I do not feel that I am trudging along a prescribed path. I feel that I am taking every step with caution, but also with awe and exhilaration as I wonder what I might come to understand. But I am sure I have only an inkling of the exploratory feelings you have had; you have guided your footfalls by experimentation, and I have guided mine only with thinking.

To those who know you, Bill, you are a treasure not only as a theorist and researcher, but also as a person. In our very first conversation by letter in 1985, I learned about your generosity. Without any hesitation, you spent eight single-spaced pages answering my ten questions of 23 July of that year about your 1978 article in the *Psychological Review* and four more single-spaced pages answering my letter of 9 September. In my experience with academic social scientists, my questions have usually been ignored or sometimes answered in three or four lines or by a reprint or two -- or sometimes just a reference to a publication -- without any personal words at all. I don't mean all my letters have drawn that sort of disappointing response; I have formed several happy professional friendships by letter. But you were more generous with thought, time, and paper than any.

You have bestowed thought, time, paper, and computer screens, not to speak of hospitality, on everyone who has evinced the slightest interest in PCT. You have understood the internal upheavals suffered by those of us who try to comprehend this strange new world -- our intellectual foot-dragging and our anguished obsequies muttered at

the graves of our long-cherished beliefs. You have been patient with misunderstanding, persevering in the face of disdain, forbearing of invective, and modest under praise.

In all of this, you have been aided immeasurably by the intelligence, stamina, and love of Mary.

I owe you, for your help to me, a great debt. You have given me a way, after all these years, of laying hold of a system concept, a psychology, that is more than a grab-bag and a tallying. You have given me a way to set down thoughts that will come to more than a mere rearrangement of what every other psychologist would say. To join you and your other followers in the effort to make PCT available to others is, for me, here in my last years, a joy, a privilege, and a comfort.

Thanks, brother.

Date: Thu, 14 Oct 1999 09:53:36 -0600
From: Bill Powers <powers_w@FRONTIER.NET>
Subject: Re: Powers
To: CSGNET@POSTOFFICE.CSO.UIUC.EDU

[From Bill Powers (991014.0946 MDT)]

Phil Runkel on 13 October 1999--

Your post left me in tears, Phil, my brother in this adventure. How petty you make all our squabbling look! You and I have no time left to waste on that. Would that the young realized how little time they have left.

With greatest affection,

Bill P.