

These posts comment on the "tough sell" of PCT, social interactions and control over time.

Date: Wed Oct 21, 1992 10:52 am PST
Subject: AWOLS, PCT Popularity

[From Rick Marken (921021.1000)] Dennis Delprato (921020) --

> Despite my distinct lack of enthusiasm for the postulates of behavioral therapy, I do not find superior technologies at present.

The "superior technologies" of behavior control already exist (as Bill and I noted); they involve the use of overwhelming force; lock-ups with armed guards, complete restriction of access to substances required for life (food, water) and, failing that, a shot through the temple.

You can try all you want to control a control system but, as Powers points out eloquently and clearly in the Powers/Williams debate, your "control" is at best ephemeral (at least, when you are dealing with a control system that is organized the same as the control system that is trying to do the "behavior control"-- ie. a control system that controls the same perceptual world). When a control system tries to control other control systems the typical result is conflict -- unless you just want to see the control system produce an action that is irrelevant to the control system itself (the dog happily puts it's paw in the air to get all that dumb love that it really cares about).

> I do find that knowledge of contemporary behavior therapy is not widespread.

Not nearly as un-widespread as it should be.

> The solutions implied by (a) and (b) above hark back to the 1960s. I suppose this might show, in part, that behavior therapists do not do a very good job of communicating new developments in their field

Dennis, you seem to believe that there is a good approach to behavior therapy. How could this be? PCT shows that behavior therapy could only make sense if it were an effort to help a person control their own perceptions relative to their own goals. "Behavior" as something seen by the therapist is irrelevant to the therapee -- but, like going AWOL, it may be quite important to the therapist. So maybe the term "behavior therapy" is just misleading. Perhaps it should be called "personal control" therapy -- unless, of course, the goal of the therapy is really to make the therapist feel better.

Greg Williams says:

> Bill, who am I to tell you that you should perceive a problem with PCT being a tough sell? That I believe there IS a problem with it is MY ideology. There is no perceived problem for you if you believe that you are right about what everyone SHOULD believe to be important, and that virtually everyone else is wrong, even if you believe PCT ideas deserve wider attention... until you begin to perceive people shrugging and walking away when you tell them what they should and shouldn't believe to be important. And then I won't have to tell you that you should perceive a problem; you'll be perceiving it.

I think this gets at the heart of Greg's complaint; he would really like to see PCT ideas get wider attention. I think he sees a lack of interest on the part of some PCTers (like myself) in finding common ground with psychologists, roboticists, biologists, AIers, ALifers, etc etc -- ie. with others in the community of life scientists who might profit from an examination of PCT ideas.

Those of us who do not seem to "compromise", "see commonalities", etc believe that we are just presenting the PCT model -- we don't feel that there is an agenda to alienate potential friends; but apparently it seems like this is true to some people (like Greg, I think).

I think this is worth a discussion. I take the view that the way to promulgate PCT is to present the model and the research honestly, doing what we can to relate this to existing relevant concerns, but not shying away from explaining the true implications of the model. I believe that attempts to "find common ground" produce the Carver/Scheier approach to PCT -- which ends up using the terminology of PCT but misses the basic point (and succumbs to the causal view of behavior in the end). I realize that the approach I advocate is not a good way to drum up a PCT following -- most people do shrug and walk away simply because they don't see the problem that PCT solves -- or don't get PCT even if they do see the problem. But I don't think it is worth it to compromise the model to try to get recruits -- PCT is neither a religion nor a political party. And every so often someone DOES get stoked on it (like I did). I think we are gaining PCTers who really get it (ie. modelers) at the rate of about 1 a year now. That's plenty for me. I just don't think you can MAKE people be interested in PCT. When the light does go on in a person, PCT sells itself. It's not worth distorting the model to try to get people interested -- you just end up with people who are really interested in the version of PCT that you made up for their sake. But, I'd like to hear your point of view Greg.

Best regards Rick

Date: Wed Oct 21, 1992 11:03 am PST
Subject: Importance & problems

[From Bill Powers (921021.0915)] Greg Williams (921021) --

>> So, they have their own perceptions, and try to control for them. So what? This still doesn't make actions important to the person using them for controlling perceptions.

> I agree. I'm just (well, it is a pretty big "just"!) claiming that the person using his/her actions to control his/her perceptions (the "influencee") can retrospectively consider having used those actions as being important.

I think you're still missing my point. The only way in which anyone can even know what actions he or she is producing is to perceive them. To "retrospectively consider having used those actions as being important" can mean, under PCT, only that the person experienced a perception dependent on the outputs at the time they were performed, remembered it, and later considered it to be an important perception (i.e., adopted a reference level for it).

> I agree that often (though not necessarily always; see above), "all that matters" (meaning all that is controlled) is "the state of the perception."

If you can think of anything else beside a perception that can be controlled (or be important to a person) then you are proposing a different model from PCT.

> Ideology comes in if Bill tries to go from an "is" (his definition of "importance") to an "ought" (claiming that "importance" as he defines it should be ALL-important to participants in such interactions, retrospectively or not, and to third-party investigators of such interactions).

According to PCT, nothing CAN be of importance to a person but perceptions. This applies now, later, and to third-party observers. All knowledge of the world comes into the brain in the form of perceptions. There is nothing else to control. The outputs of a person are known to that person only to the extent that they affect that person's perceptions, and only the perceptions affected by the outputs can be controlled. The outputs of a person affect other people's perceptions differently, in general, from the way they affect the person's own perceptions. The action I perceive myself performing is not, in general, the action that others see me performing. And neither my perception nor that of others is a direct apprehension of my outputs or their actual physical effects.

- > If he tries to do this, I claim that he will "turn off" a lot of folks to PCT ideas -- folks like the 40-year-old accountant who is glad that he learned the multiplication table in school, and like the little old lady who realizes a year after her roof was "repaired" that it wasn't.

If you would try analyzing these situations in PCT terms, under which all the accountant or the little old lady can do is to control perceptions (including a perception of "gladness" and a perception that is "realized"), perhaps you would see that there is no contradiction. On the other hand, if you simply take appearances at face value and give them their traditional informal non-PCT naive realist interpretation, you will continue to miss my point.

- > I brought up reorganization because you had, several posts ago, said (in line with your recent definition of "importance") that B disturbing A or altering A's environment is "unimportant" to A if A maintains control throughout, and that B disturbing A or altering A's environment would be "important" to A only if A lost control, becoming conflicted, and therefore reorganizing.

My fault. I should have said that I was offering a superseding definition. "Importance" is an ambiguous term. You can say that eating is important to someone, and to prove it cite evidence showing that the person IS controlling successfully for eating. Or you can say that that person wants to eat, but is not able to do so, and that eating is then important because of NOT being controlled. "Important" turns out to be a pretty vague term when you break it out into PCT. By offering my definition I was trying to settle on the first meaning.

It's much simpler to say that people have reference levels for perceptions, and normally maintain the perceptions near their reference levels, and when they can't they reorganize. Words like "importance" are typical of the way we speak of experience and behavior in ordinary language; they point to whatever meanings we have in mind, the meanings shifting with context.

This is an example of the ambiguity:

- > To be explicit, I claim that many people consider as highly important social interactions of the type wherein B controls for some of his/her perceptions which depend on some actions of A, REGARDLESS of whether A's actions during the interaction are important (your definition) to A or not ...

Do they view those social interactions as important because they ARE being successfully controlled by the viewer, or because they are NOT being successfully controlled? If the viewer sees exactly the social interaction that the viewer wants to see, or if the viewer is able to act in some non-demanding way to make the social interaction return immediately to the desired state, then it is clear that the interaction is important to the viewer, but also that it does not constitute a problem for the viewer. It seems to me that the social interaction that a viewer would consider "highly important" would be one in which small errors will lead to energetic corrective action. But those same social interactions would be "highly important" in quite a different sense if those corrective actions FAILED. Then they would be important in the sense of threatening the integrity of the system; they would call for reorganization.

Perhaps we can use the term "problem" or "difficulty" or some synonym to refer to perceptions that are important because attempts to control them do not work, and reserve the less specific term "important" to mean simply that the person perceives something, has a reference level for it, and acts to correct any difference (or would do so if possible). Thus to say that something is important to a person tells us that there is a reference level for a perception, but does not tell us whether the person is succeeding at controlling the perception. To say that a person has a difficulty with an important perception implies that attempts to control it are not working, and implies that reorganization is likely to be occurring.

And I think we should avoid further confusing the meanings of words by referring to THE importance of a social interaction or anything else, as if there were some objective standard of importance that is independent of anyone's perceptions or desires.

- > There is no perceived problem for you if you believe that you are right about what everyone SHOULD believe to be important, and that virtually everyone else is wrong, even if you believe PCT ideas deserve wider attention... until you begin to perceive people shrugging and walking away when you tell them what they should and shouldn't believe to be important.

I am not telling people what SHOULD be important to them. I am telling them that what IS important to them is their own perceptions. I am telling them that their perceptions are important because of what they desire those perceptions to be. People resist this idea mightily, because as a justification for their own desires and opinions, they like to cite OBJECTIVE reasons for what they do -- that is, reasons grounded not in their own private understanding, but in some superior form of knowledge about the world as it actually is, knowledge that is not based on their own fallible perceptions and predictions but is TRUE.

When I say that all anyone can be concerned about and control is private perception, many people take this to imply an attack on the way they do things, and a recommendation that they behave differently. They interpret my words as if I had said they should stop being concerned with and trying to control other people and objective states of the environment, leave other people alone, and just be concerned with their own private lives. But this is not what I am saying at all. I am trying to tell them that even while they are trying to control other people and objective aspects of the environment, what they are really doing is controlling for their own perceptions. THEY NEVER HAVE BEEN ABLE TO CONTROL ANYTHING ELSE.

The resistance become mightiest from people who believe they are controlling other people for their own good. Not only do they insist that they must be doing good because that is what they intend, but they insist that the effects they have are OBJECTIVELY good for the other person.

In some ways what I really have to say is worse than telling people that they ought to stop controlling other people and be nice. At least they can fight back against such an attempt to tell them what to do. But I am discussing a description, not a prescription. I am saying that even when people think they are controlling other people, all they are actually controlling are their own perceptions. They can go right on doing what they're doing -- but it isn't what they think they're doing. I'm pointing out that this is the reason that they are so unsuccessful at controlling other people; they never were doing that in the first place, except in some trivial way that caused no problem for the other people. I am showing that when they have difficulties in achieving such apparent control of others, and try their best to overcome those difficulties, all they accomplish is to create conflict or put the other person in a state of reorganization that, in the end, preserves the other's capacities to control (or ends fatally).

The only time I use the term "ought" is in saying what people must do IF they want to avoid the difficulties. If you want to avoid conflict with others, then you have to stop trying to control what you can't control -- which is anything that matters to them, anything they are already controlling. If you like having those difficulties, if you think that conflict is an exciting and interesting state to be in relative to other people, then of course you needn't alter your ways. Evidently you are content with poor control of some of your perceptions or with imagining that you have good control when you don't, and if so that's your business (until you try it on me or someone I have decided to defend).

Before we can profitably get into a discussion of how people CAN interact under PCT, we must put aside all the misinterpretations of how they DO interact according to PCT. This means changing many informal interpretations of what we see going on around us.

Best, Bill P.

Date: Thu Oct 22, 1992 5:01 am PST
Subject: Unimportant importance

From Greg Williams (921022)

WARNING: Hit your delete key now if you aren't interested in the PCT approach to social interactions -- this is liable to take several KB.

>Rick Marken (921021.1000)

> You can try all you want to control a control system but, as Powers points out eloquently and clearly in the Powers/Williams debate, your "control" is at best ephemeral (at least, when you are dealing with a control system that is organized the same as the control system that is trying to do the "behavior control"-- ie. a control system that controls the same perceptual world). When a control system tries to control other control systems the typical result is conflict -- unless you just want to see the control system produce an action that is irrelevant to the control system itself (the dog happily puts it's paw in the air to get all that dumb love that it really cares about).

"Ephemeral." Another new PCT-definition? The dog "ephemerally" raises its paw and walks beside its owner right into the neutering operating room. Look out, you critical reference signal, you're about to get Ace-of-Spayed!

> I think this is worth a discussion. I take the view that the way to promulgate PCT is to present the model and the research honestly, doing what we can to relate this to existing relevant concerns, but not shying away from explaining the true implications of the model.

So do I. I love that phrase: "the true implications of the model." Here, here!

> But I don't think it is worth it to compromise the model to try to get recruits -- PCT is neither a religion nor a political party.

Neither do I. And I don't think it is worth it to claim that PCT supports an ideology which it doesn't support, regardless of whether this gets or drives away recruits.

- > It's not worth distorting the model to try to get people interested -- you just end up with people who are really interested in the version of PCT that you made up for their sake. But, I'd like to hear your point of view Greg.

Neither Bill nor I are attempting to distort the model itself. He and I differ to some degree on the possible details (particularly those which are hard to test at this time) of the model, but we differ most significantly on the importance to many people of some implications of the model WHICH WE BOTH AGREE ON. I claim that many people think that it is important to try to explain and deal with social interactions involving what you call "ephemeral control" and what Bill calls events which are "unimportant to the 'influencee.'" I don't deny that you can make such definitions as "ephemeral" and "unimportant"; I do deny that they have relevance to the many people who want to understand social interactions wherein parties are controlling their perceptions dependent on actions of other parties. The question of whether those people are misguided in some sense about what they think is important is an extra-PCT matter of ideological conflict. As I see it, PCT (undistorted!) has much to say about what these people think is important, even though you and Bill say that what they think is important involves ephemeral/unimportance. For these people (but not for you!), your ephemera/importance is beside the point.

>Bill Powers (921021.0915)

- > I think you're still missing my point. The only way in which anyone can even know what actions he or she is producing is to perceive them. To "retrospectively consider having used those actions as being important" can mean, under PCT, only that the person experienced a perception dependent on the outputs at the time they were performed, remembered it, and later considered it to be an important perception (i.e., adopted a reference level for it).

I basically agree, with the exception that a person who does NOT remember his/her earlier actions can become convinced that he/she actually did them by receiving and accepting new information (such as a friend's explanation that "you signed the deed!" or a video showing the signing). But, so what? What is unimportant (your definition) at time x1 becomes important (your definition) at time x2. And, because this often occurs in the course of human life, lots of people are interested in situations where this is possible -- many of which are situations where one party is controlling his/her perceptions which depend on actions of another party, those actions being unimportant (your definition) to the second party at the time of the interaction, but important (your definition) to the second party at some time after the interaction. Note that the second party doesn't actually need to adopt a NEW reference level after the interaction: one can want to make money all along and think one is controlling for that, but find out (too late!) that he/she has actually lost money in the interaction. And that's one of the reasons for police and criminal courts showing GREAT interest in such interactions.

- > If you can think of anything else beside a perception that can be controlled (or be important to a person) then you are proposing a different model from PCT.

I do not and am not, notwithstanding your own loose language about "controlling another's actions," which I have complained about before even as I went along with you on it.

- > According to PCT, nothing CAN be of importance to a person but perceptions. This applies now, later, and to third-party observers.

I agree. Their CURRENT perceptions. At time t1, their perceptions then; At time t2, their perceptions then. At time t1, one's perceptions of one's actions occurring then can be unimportant (your definition), while at time t2 (>t1) the perceived memory of those actions can be important in the sense of causing a big problem for or making possible successful control of other perceptions (e.g., all their money is gone, or now they can rescue that drowning person).

- > If you would try analyzing these situations in PCT terms, under which all the accountant or the little old lady can do is to control perceptions (including a perception of "gladness" and a perception that is "realized"), perhaps you would see that there is no contradiction. On the other hand, if you simply take appearances at face value and give them their traditional informal non-PCT naive realist interpretation, you will continue to miss my point.

I have not been doing and do not wish to do what your last sentence says. I don't want to be set up as a strawbuddy, either.

GW:

- >> To be explicit, I claim that many people consider as highly important social interactions of the type wherein B controls for some of his/her perceptions which depend on some actions of A, REGARDLESS of whether A's actions during the interaction are important (your definition) to A or not ...
- > Do they view those social interactions as important because they ARE being successfully controlled by the viewer, or because they are NOT being successfully controlled?

Neither. They view them as important because A later says that his/her actions which occurred during the interaction are (at that later time) important to him/her: "He tricked me into signing the deed." "It's a good thing I did those 10 laps of the pool each day like the teacher wanted, or I would have drowned, myself, out there!"

- > Perhaps we can use the term "problem" or "difficulty" or some synonym to refer to perceptions that are important because attempts to control them do not work, and reserve the less specific term "important" to mean simply that the person perceives something, has a reference level for it, and acts to correct any difference (or would do so if possible). Thus to say that something is important to a person tells us that there is a reference level for a perception, but does not tell us whether the person is succeeding at controlling the perception. To say that a person has a difficulty with an important perception implies that attempts to control it are not working, and implies that reorganization is likely to be occurring.

Fine by me. Just don't ignore changes in what is a "problem" and what is "important" over time.

- > And I think we should avoid further confusing the meanings of words by referring to THE importance of a social interaction or anything else, as if there were some objective standard of importance that is independent of anyone's perceptions or desires.

I continue to agree.

- > I am not telling people what SHOULD be important to them. I am telling them that what IS important to them is their own perceptions. I am telling them that their perceptions are important because of what they desire those perceptions to be.

I have no problems with your definition, as I've said before.

- > I am trying to tell them that even while they are trying to control other people and objective aspects of the environment, what they are really doing is controlling for their own perceptions. THEY NEVER HAVE BEEN ABLE TO CONTROL ANYTHING ELSE.

I'm saying the same thing, and trying to use PCT ideas to explain the nature and limits of controlling one's own perceptions which depend on others' actions.

- > The resistance become mightiest from people who believe they are controlling other people for their own good. Not only do they insist that they must be doing good because that is what they intend, but they insist that the effects they have are OBJECTIVELY good for the other person.

The people I tend to respect are those who listen and (with reasonable caution) BELIEVE others when they claim that "what I did then is important to me now." Those who "objectively" disregard a "victim's" judgements about the importance to him/herself (the "victim") of others' controlling their (the others') perceptions depending on the victim's actions rate lowest in my own ideology.

I am saying that even when people think they are controlling other people, all they are actually controlling are their own perceptions.

I'm saying the same thing, and noting that often when a person controls his/her perceptions which depend on others' actions, the others and many third-parties (i.e., sociologists) think it important, either during or after the control episode.

- > They can go right on doing what they're doing -- but it isn't what they think they're doing. I'm pointing out that this is the reason that they are so unsuccessful at controlling other people; they never were doing that in the first place, except in some trivial way that caused no problem for the other people. I am showing that when they have difficulties in achieving such apparent control of others, and try their best to overcome those difficulties, all they accomplish is to create conflict or put the other person in a state of reorganization that, in the end, preserves the other's capacities to control (or ends fatally).

But control of one's perceptions dependent on others' actions IS OFTEN SUCCESSFUL -- otherwise nobody would care about it! "Trivial" -- another new definition? Something can be perceived as "trivial" now and NOT "trivial" tomorrow. Why should anybody NOT be concerned about such phenomena? Because it is not PCT-control? Oh, come on! The FACT that anybody CANNOT make anybody else want what they don't want in the short-term is beside the point -- it looks to me like many people figured that out long ago, and went on to do what they CAN do (sometimes): control their own perceptions depending on others' actions.

- > If you want to avoid conflict with others, then you have to stop trying to control what you can't control -- which is anything that matters to them, anything they are already controlling.

I agree. I think I see so little conflict in my own everyday life (speaking, of course, from the distinctly privileged viewpoint of a farm in central Kentucky!) because the "trivial" type of control (your word), as exercised both by myself and my acquaintances, is so often successful. When the "trivial" type of control is occasionally UNSuccessful, I begin to appreciate its importance ever more!

Best, Greg

Date: Thu Oct 22, 1992 11:59 am PST
Subject: Unimportant importance

[From Rick Marken (921022.1000)] Greg Williams (921022)--

> And I don't think it is worth it to claim that PCT supports an ideology which it doesn't support, regardless of whether this gets or drives away recruits.

Is it the "people cannot be controlled" ideology? I think talking about this does cause a lot of problems, especially if we are not clear about terms. When you actually work with the working model you can see what you can and cannot do to it. If you want to call some of those things "control" that's fine. If, as Bill said, you are happy with the results of your interactions with control systems, then that's great -- whether you want to call what you do "controlling" or "educating" or "cooperating" or whatever. The control model just happens to work the way it works. If you try to control some variable aspect of the control system's performance then you will be successful if it is something that is not also being controlled by the control system or you will get into a conflict with the control system if it is. If you are "controlling" and not getting into conflict then either you are controlling what the control system is not controlling or (most likely) you are not really controlling (bringing a perception to a preselected reference level and maintaining it there against disturbance). If people are control systems, then this is just the way it works.

[On re-reading this I see that I WENT UP A LEVEL right at this point. I thank Greg's tenaciousness for this consciousness raising.]

I admit that, in my discussions of PCT, I have revealed my personal ideology - - which is to avoid conflict (especially the violent type) and foster cooperative efforts to control mutually controlled variables. I may have given the impression that I think PCT justifies this ideology -- IT DOES NOT. Maybe this is what Greg is getting at in his critique of PCT ideology. If so, I repent and accept your criticism. PCT only says that controlling other control systems (REALLY controlling them; not the mamby pamby stuff) leads to conflict -- IF you try to control what the other control system is also trying to control. The ideology part is thinking that this kind of conflict is no good; ie. having a reference signal set at 0 for conflict. If you like conflict (and many people seem to love it -- football games, free enterprise economics, etc) then PCT can, indeed, help you produce all you want.

It is hard to discuss PCT without letting my references for non-PCT perceptions get in the way. I see that I have been guilty of this -- Bill's last post really made it clear to me. It is incredible how hard it is to describe the model without biasing one's description in terms of one's principles. I want to see a world where people are not at each other's throats; but that has nothing to do with PCT, except that PCT can help show people how people might be able to live in such a world (just stop trying to control each other). But the goal of living in such a world is mine; others might like to live in a world of hand to hand combat and cut-throat competition. Different reference levels for the same principle. I guess I'll just have to take a deep breath and accept the fact that other people may really WANT to live in a world like we live in -- filled with hatred and oppression (ie. conflict). Fine with me -- except (as Bill said) when they try to oppress me or my loved ones.

So, let's get back to the model, knowing that it is difficult to DISCUSS it without coloring the "implications" with one's own values. That's why I like discussing the model in terms of the computer demos -- we can get closer to seeing what the model DOES, not what we think it might IMPLY about other stuff we care about.

Best regards Rick

Date: Thu Oct 22, 1992 1:55 pm PST
Subject: Importance out, problems in

[From Bill Powers (921022.0900)] Greg Williams (921022) --

> I claim that many people think that it is important to try to explain and deal with social interactions involving what you call "ephemeral control" and what Bill calls events which are "unimportant to the 'influencee.'"

Formerly I was thinking that "important" meant "causing some sort of problem that had to be dealt with." Now I am saying that a perception is important to a person if the person perceives and has a reference level for it and if possible controls it. Now we can say that unimportant variables are those that are not perceived or that are perceived but have no preferred state, while important perceptions are those that people are actively concerned about controlling. So now we agree, if you accept this new definition, that all forms of control are important to the controller, whether they involve the actions of other people or not. This simply makes "important" synonymous with "controlled or potentially controllable." Because we are not concerned with uncontrolled perceptions right now, we can drop the term "importance."

Let's see how far you will go along with this development.

A "disturbance" is either a direct influence applied to a controlled variable, or a change in the parameters of the link between a person's action and the variable it controls.

A "problem" is a situation in which control is sufficiently difficult to result in substantial and sustained deviation of one or more perceptions from their reference levels.

"Reorganization" is used in a very general sense, and could include a change in the operation of higher-level systems without any actual change in organization at those levels (i.e., a change in strategy dictated by learned principles). Sorting out the ways in which behavior at a given level can change its characteristics can be left for later.

First, let's consider a non-exhaustive set of cases from the standpoint (mainly) of the person whose behavior is affected from outside.

1. Unproblematic interactions:

If your actions (outputs) are controlled by another person, but in such a way that NO perception controlled by you is materially disturbed in the process (meaning that the other's disturbance plus your action keeps your perception near its reference level), then the other has not caused a present-time problem for you. It makes no difference to you whether the other elicited an action intentionally or unintentionally, because in neither case do you experience a error that can't easily be counteracted. You don't need to distinguish between disturbances applied for a purpose and disturbances that occur naturally or accidentally.

I claim that this is the most common form of human interaction: all parties involved continue to control their own perceptions without any problems, even though they continually adjust their actions to compensate for disturbances by the actions of other people, and often deliberately elicit actions from other people (handing the cashier your \$5 purchase and a \$20 bill).

2. Present-time problem-causing interactions:

Disturbances of your controlled perceptions will cause a problem in present time when either the disturbance exceeds your capacity to resist it, or the action necessary to resist it has side-effects that disturb another of your perceptions in a way that can't be resisted.

Direct disturbances that cause errors result in conflict between persons. Disturbances that elicit actions which cause errors in the actor result in internal conflict in the affected person.

When a present-time problem is caused by an interaction, the person experiencing the uncorrectable error can only endure the error or reorganize.

3. Delayed problem-causing interactions:

A disturbance can result in an opposing action that has problematical effects which are not immediately experienced. If you anticipate those effects (all anticipations or predictions occur in present time), an internal conflict will immediately result. If you carry out the action that resists the present-time disturbance, you will cause a departure of a predicted future state of a perception from the desired future state. This is a present-time error. So this is really case 2, above.

If you fail to anticipate or incorrectly anticipate the future effect of your action, then you will do nothing to prevent its occurrence. You will produce the action needed to counter the present-time disturbance and you will continue to control successfully until the delayed effect occurs. The problem will then appear, in what is now present time. If you can resist the unwanted effect, there will be no problem. If you can't resist the effect, you will either suffer the resulting error, or reorganize.

Now let's shift the point of view more toward the person who is controlling the actions of someone else.

"Output" means the physical output generated by a control system.

"Action" means a perception of an output (either one's own or someone else's).

4. Unproblematic control of the actions of others.

Present-time control:

Applying disturbances that can be resisted by another person can be used by a controller to control the outputs of the other person. The aspect of those outputs that is controlled is whatever aspect is perceived by the controller as an action. If the perceived action corresponds exactly to the aspect of output that affects the other's controlled variable, the other's physical output is controlled when the perceived action is controlled.

Future control:

Disturbances can be applied in a way that elicits an action that entails a predicted future effect on the other person. If no uncorrectable error is caused in the other person, either present or anticipated, the action will take place and the controller will immediately experience a match of the predicted future effect to the effect the controller wants. It does not matter whether the effect will actually occur in the future, because the prediction is made in present time and the goal is satisfied in present time. If, when the future arrives, the effect does occur, the controller will continue to experience zero error. If this future effect does not cause any error in the controlled person, the controlled person also will experience no error.

5. Problematic control of the actions of others.

Present-time problems.

If a disturbance materially alters a controlled variable in another person, two things will happen. First, the relationship between the disturbance and the action it controls will change. If that change is large enough for the other to lose control, control of the other's action will be lost. Second, the other person will begin to reorganize. That will alter the characteristics of

the control system in question, and may also bring other control processes into play aimed at correcting the error. In any case, conflict between the controller and the controlled person will appear.

If the controller has to produce too much effort to maintain control, or loses control altogether, the controller will begin to experience uncorrectable error and will reorganize.

Future problems.

If the controlled person anticipates a future error as a result of a present action, the action will not take place as the controller wishes. The controller will experience error of two kinds: the present-time action will not occur as desired, and the prediction of the future effects of the action will be different from the effect that is wanted in the future. The controller will either continue to experience error or reorganize.

If the controlled person does not anticipate the future error, the action desired will take place and the controller will be satisfied. When the future arrives, however, the effect on the controlled person (if it occurs as predicted) may cause an error. The controlled person will then act to oppose the effect. If this action by the controlled person is successful, the controller will experience an error and reorganize. If it is unsuccessful, the controlled person will experience an error and reorganize. In either case, one of the persons must experience an error, and interpersonal conflict will exist.

In summary:

Unproblematic control of another person's actions causes no uncorrectable errors in either the controller or the controlled person. Each person continues to operate normally, without any change in organization. Each prevents the other from having any unwanted effect on any controlled perception. All parties adjust their outputs as required to maintain control.

Problematic control of one person by another results in conflict between the parties, and loss of control by one or both of them.

OK so far?

Best, Bill P.

Date: Thu Oct 22, 1992 6:21 pm PST
Subject: PCT popularity; Why 99%?

[From Tom Bourbon (921022.13:45)]

I second Rick Marken's claim that we should not neuter PCT in an attempt to gain a wider audience. I will describe some of the pressures I have encountered to do that. Then I will identify several people who have published extensively, claiming that control theory is compatible with everything else in behavioral- social-cognitive science. Then I will describe a clear example of the disappointing consequences that follow from their having published distorted, simpatico versions of control theory.

[Rick Marken (921021.1000)]

>>Greg Williams says:

>> Bill, who am I to tell you that you should perceive a problem with PCT being a tough sell? That I believe there IS a problem with it is MY ideology. There is no perceived problem for you if you believe that you are right about what everyone SHOULD believe to be important, and that virtually everyone else is wrong, even if you believe PCT ideas deserve wider attention... until you begin to perceive people shrugging and walking away when you tell them what they should and shouldn't believe to be important. And then I won't have to tell you that you should perceive a problem; you'll be perceiving it.

Rick Marken replies:

> I think this gets at the heart of Greg's complaint; he would really like to see PCT ideas get wider attention. I think he sees a lack of interest on the part of some PCTers (like myself) in finding common ground with psychologists, roboticists, biologists, AIers, ALifers, etc etc -- ie. with others in the community of life scientists who might profit from an examination of PCT ideas.

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TB:

Rick describes a frequent interpretation offered by reviewers, editors, and others who see or hear manuscripts and presentations on PCT, especially when the presentations or manuscripts come from "hardcore" PCTers. I have a collection of reviews in which the writers say I (and my co-authors if there are any) went out of my way to make PCT unpalatable, or that I want readers to reject PCT. Most of them continue with remarks that I should point out how PCT "is like --- ;" or "is similar to --- ;" or "is just another way of saying --- ." Or THEY say I should say that "we (they) already know --- ." A few say that most strong assertions by PCT writers (eg., behavior controls perception) are "merely ideological." etc., etc., etc.. When we decline to mend our evil ways (by going along with what the reviewers say) our refusal is often taken as proof that we do not want people to read about or to understand PCT. Of course, their comments are self-fulfilling: after they tell the editors not to publish our manuscripts, no one reads about PCT.

I believe it is essential that we avoid presenting PCT in a watered-down version and that we resist all suggestions that it "offers another perspective" on the same old things, or that it is "a convenient framework" for "viewing" and unifying things "we already know." Below, I will present a clear example of why I think we must hew close to the basics.

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RM:

> Those of us who do not seem to "compromise", "see commonalities", etc believe that we are just presenting the PCT model -- we don't feel that there is an agenda to alienate potential friends; but apparently it seems like this is true to some people (like Greg, I think).

#####

TB:

Rick's point is well taken. You have not lived life to the fullest until you labor to submit a manuscript on PCT (perhaps for the second or third or ... time) then read a reviewer's smug accusation that you (the one who wrote the manuscript) are "determined to elicit rejection." It calms the spirit and soothes the nerves.

RM:

> I think this is worth a discussion. I take the view that the way to promulgate PCT is to present the model and the research honestly, doing what we can to relate this to existing relevant concerns, but not shying away from explaining the true implications of the model. I believe that attempts to "find common ground" produce the Carver/Scheier approach to PCT -- which ends up using the terminology of PCT but misses the basic point (and succumbs to the causal view of behavior in the end). I realize that the approach I advocate is not a good way to drum up a PCT following -- most people do shrug and walk away simply because they don't see the problem that PCT solves -- or don't get PCT even if they do see the problem. But I don't think it is worth it to compromise the model to try to get recruits -- PCT is neither a religion nor a political party. And every so often someone DOES get stoked on it (like I did). I think we are gaining PCTers who really get it (ie. modelers) at the rate of about 1 a year now. That's plenty for me. I just don't think you can MAKE people be interested in PCT. When the light does go on in a person, PCT sells itself. It's not worth distorting the model to try to get people interested -- you just end up with people who are really interested in the version of PCT that you made up for their sake. But, I'd like to hear your point of view Greg.

TB:

Agreed, on practically every count. It is a mistake to distort, water down, neutralize, or defang PCT. We should not go out of our way to build bridges, identify communalities, find common ground, etc, when the other side of the river is quicksand. Control BY an organism is different from control OF an organism (even if "control of" is camouflaged in the contemporary jargon of "behavioral analysis" or "cognitive science"). Period. Crisp predictions by a generative model of control behavior are not the same as statistical mush, in which significant differences between mean scores from groups, and low but "significant" correlations, are offered as evidence supporting one or another "theory" of behavior. Period. Usually the behavioral phenomena or the cognitive- emotional-social processes alleged to exist on the other side of the river are phantoms.

In such cases, there is nothing to which we can build a bridge -- there is no communality. But that does not prevent some writers from publishing extensively with claims that PCT can be all things to all people. Rick mentioned Carver and Scheier. They are part of the list of "villains" that rolls from my tongue or fingertips as one entity:

Carver-Scheier-Hyland-Lord-Hollenbeck.

That would be C.S. Carver, M.F. Scheier, M. Hyland, R.G. Lord, and J.R. Hollenbeck. There are others, but this group deserves special attention. All offer CT as a "framework" or "perspective" or "conceptualization" or "view" for virtually everything. All "build bridges," "promote unity," "integrate," and all of the other things PCTers are so often urged to do. Collectively, the members of my rogues' gallery have published tens of times more material on what they call control theory than have any participants on CSG-L. For them, publication is easy -- say that control theory is not a threat, that it affords another compatible perspective on everything, and no one is bothered. Isn't that the best way to spread the word about PCT?

No!

Their presentations of a nonfunctional and eviscerated control theory have done far more harm than good. On this opinion, I cannot be moved. Many people have formed their "understanding" of control theory by reading the numerous publications of that group. Their collective writings are so

extensive that an innocent reader could easily believe they form an authoritative literature. That is not true. Time for my major case in point.

Bandura, Albert (1989). Human agency in social cognitive theory. *American Psychologist*, 44, 1175-1184.

As part of his presentation, Bandura raised and knocked down a pathetic description of a "negative-feedback" system. That exercise occupies much of pages 1179-1191. To any PCTer, it was obvious that he did not understand negative feedback, but Bandura is an authority and now the article is cited widely and favorably.

Bill Powers wrote a "comment:"

Powers, William T. (1991). Commentary on Bandura's "Human agency." *American Psychologist*, 46, 151-153. I recommend it.

A few others also submitted comments, some dripping with praise. Of course, Bandura wrote a reply:

Bandura, Albert (1991). Human agency: The rhetoric and the reality. *American Psychologist*, 46, 157-162.

Bandura missed the point of Bill's comments and continued to discuss control theory in thoroughly negative tones. While I was reading his reply, the awareness dawned that he was writing about the control theory presented by the unholy alliance of Carver-Scheier-Hyland-Lord-Hollenbeck, not about PCT. My insight was confirmed when I read:

"Locke (in press) has argued that much of control theory involves translation of the principles and knowledge of goal theory into stilted machine language without providing a new perspective or predictive benefits. He further showed that adherents of control theory have now grafted so many ideas from other theories on the negative feedback loop as (sic) to remedy its prediction problems that control theory has lost its distinctiveness" (1991, p. 158).

Sadly, those are exactly my own conclusions when I assess the literature of the devil's alliance. I knew Locke would cite the popularizers and bridge builders.

He did:

Locke, Edwin A. (1991). Goal theory vs. control theory: Contrasting approaches to understanding work motivation. *Motivation and Emotion*, 15, 9-28.

Locke accurately summarized much of the material produced by the "nice guys" - the sweetness and light brigade -- of control theory. EVERYONE who believes we should go out of our way to mollify people from every other camp in cognitive-social-behavioral science should read that article.

Weak-kneed presentations of PCT, in which core concepts are abandoned or verbally "modified" every time some established critic squeaks, do no good. They are misleading and harmful.

I am not suggesting that we go to the other extreme and bash everyone who does not catch on to PCT as quickly as we might like. But anyone who believes we will spread awareness of PCT more quickly by deliberately softening its implications should read the references I have cited, in chronological order.

Why 99%?

Earlier this year, a former graduate student and I submitted a manuscript describing our modeling of cooperation by pairs of people. Our results include numerous +.997 correlations between predictions of moment-by-moment actions made by two interacting PCT models and the actions of two people. In

the manuscript, we cited the exchange between Bandura and Powers, in *American Psychologist*, and tried to build a bridge -- a real one, not a string of b*** s***. We suggested that Bandura's misunderstanding of control theory and of negative feedback came from his familiarity with faulty sources -- the nasty five. We also suggested that our results provided a modest example of the predictive power of a legitimate negative feedback model, namely, the model from PCT. We were rejected. Among the many fascinating reasons, one reviewer "assured the authors" that "Bandura would not be impressed." (Who knows, maybe that review was by Bandura himself!)

Assuming the reviewer was right, what WOULD impress Bandura? He gives a strong hint in his reply in *American Psychologist*:

"As shown in Table 1, perceived self-efficacy accounts for a substantial amount of variance in phobic behavior when anticipated anxiety is partialled out, whereas the relationship between anticipated anxiety and phobic behavior essentially disappears when perceived self-efficacy is partialled out" (1991, p. 160).

Forget about the problems of defining terms and constructs -- quicksand and phantoms, all! Table 1 is on page 161. In it is a summary of correlations from several studies on the aforementioned phantoms. They range from $-.22$ to $+.77$. They are accompanied by a cloud of asterisks: * ** ***. How silly I was not to see why Bandura would be unimpressed by correlations of $+.997$! Our correlations "accounted for" 99.4% of the variance; he must only be impressed if you can "account for" a paltry 4.8% to 59%. Our coefficient of alienation (aka, probability of failure in a prediction) would be < 0.1 ; if his representative, the reviewer, is correct, Bandura must want probabilities of failure ranging from > 0.98 to about 0.66. Now I understand.

(The "coefficient of alienation," or "coefficient of failure," was a big topic on CSG-L long ago. For a good source -- an old one -- see:

Guilford, J.P. (1956). *Fundamental statistics in psychology and education*. NY: McGraw-Hill.)

Why strive for 99% of the variance "accounted for?" It is simple: To avoid the mistake of believing phantoms are facts; to avoid the sham and scam of saying you have a science, when all you have is statistical mush.

Why insist on hewing as close to the core of PCT as possible, rather than making PCT an easy pill for all to swallow? Figure it out.

Best wishes, Tom Bourbon

Date: Thu Oct 22, 1992 6:51 pm PST

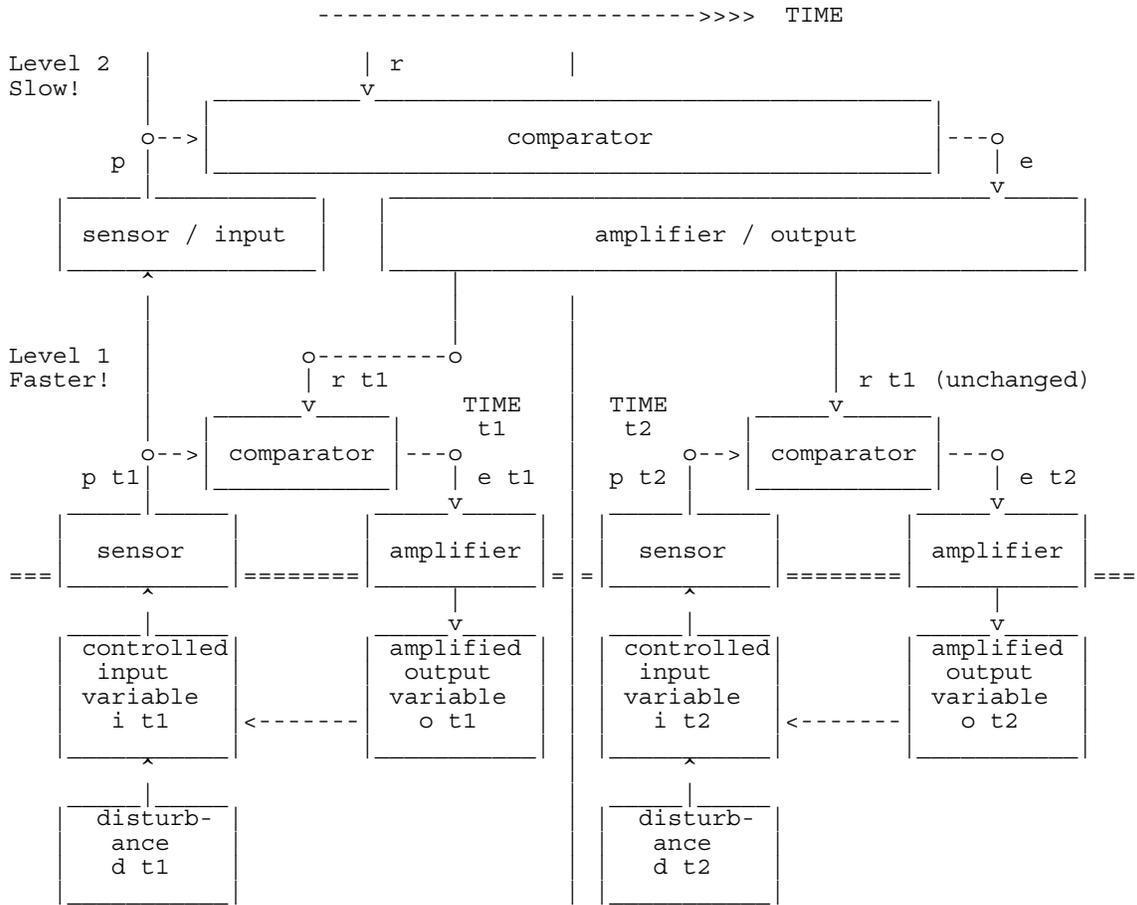
[From Dag Forssell (921022)]

Williams (921022), Marken (921022.1000), Powers (921022.0900)

A lovely sequence today. More eloquent clarification, going up a level and expansion of control over time.

I think time is an important variable here, which deserves recognition and will clarify a number of the concerns we all wrestle with in real time. Time figures prominently in the discussion of AWOL commitment as well. Some thoughts on time:

The hierarchical control mathematics taught by Bill and Rick includes slowing factors and thus time recognition. I prefer to think and teach graphically. In Durango 1991, I presented a chart in three levels, portraying what I called: Timing of control. Two levels are shown here, which is all we need.



This is an attempt to portray that the higher level control system MUST be slower for the combined system to be stable. We demo this easily with hand movements.

I also wrestled with time when I developed and posted on behavior of perception (Dag Forssell (920926)). The intensity level of control - muscle fiber control - is here and now. The configuration level - position of body part is rather present also. The sequence level - driving in progress - covers minutes or hours. The systems concept level - I am a professional - covers almost infinite time.

It feels awkward to portray the hierarchy of control without all the levels being focused on the present. In today's post Bill clarifies that we consider a large range of time in our imagination. This is helpful to me. It occurs to me that the time aspect of HPCT can be portrayed as follows: (In my world, if I cannot graph it, it is not real :-)

----->>> TIME

Syst Conc *****
Principle *****
Program *****
Sequence *****
Category *****
Relationship *****
Event ***
Configuration *
Transition *
Sensation *
Intensity *

Best to all, Dag