

Classrooms Can Use Therapy, Too

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Paul Dell, a family systems therapist inspired by the systems thinking of Humberto Maturana, posits that family systems achieve pathology because of what he calls “epistemological errors”: either the refusal to acknowledge reality or the desire to control reality. Reality, in Dell’s definition, is the coupled nature of human interaction, or structure determinism. Applying Dell’s definition to classrooms, I identify two epistemological errors commonly committed by teachers: valuing content more highly than relationships in the classroom and attempting to control students through classroom management techniques. When these two practices are viewed through the systems lens rather than through the modernist, objectivist lens, the relationships that are enacted in a classroom among teacher, students, and the content under study come into focus, and pathology, or repetitive behaviors that obviate desired learning, is more easily discerned. Given the emphasis systems theory places on relationships, I claim that, as with family systems, classroom systems can benefit from the kind of analysis—or “therapy”—that exposes the “coherence,” or the tight relational couplings, within the system that, in some cases, invites non-educative interactions. Such therapy can help teachers shift their own attitudes and behaviors so as to influence those of their students.

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Arguing against the “homeostasis” model of family systems therapy—a dualistic model that assumes social systems resist change—Paul Dell (1982) uses the systems theory of Humberto Maturana (Maturana & Varela, 1980; 1987) to suggest that social systems, like other complex living systems, actually embrace change. As Dell (1982) puts it, “when a system is perturbed, as all systems are, it tends to seek a steady state that is *always* slightly different from the preceding steady state” (p. 27, emphasis in the original). Just as we can’t step into the same river twice, Dell (1982) tells us, social systems are dynamic entities, constantly adjusting, constantly fluctuating, constantly evolving—constantly learning.

According to Dell (1982), when therapists work with a social system such as a family, they need to discern the system’s “coherence,” its “congruent interdependence in functioning whereby all the aspects of the system fit together” (p. 31). Therapists need to view the system as a whole and recognize that, far from resisting change and seeking some sort of dysfunctional equilibrium, the system continuously interacts with its environment—effects “structural coupling” (Maturana, 1975)—according to its particular organization, what Dell (1982) calls “the unalterable reality with which the therapist must contend” (p. 30). In family systems therapy, the most healing interventions consist of “*going with the reality*” (p. 31, emphasis in the original): discovering how the system is organized and interacting with it in such a way as to use its own “reality,” its own essential behaviors, to change it.

Too often, the systems that family therapists encounter are pathological: their members “frequently—much too frequently—commit epistemological errors upon themselves and others” (Dell, 1982, p. 37). According to Dell (1982), epistemological errors are “the misunderstanding of, or the outright refusal to accept, reality” (Dell, 1982, p. 31). “Passive” epistemological errors are the failure to acknowledge reality (Dell, 1982); a popular term for this type of error is “denial.” “Active” epistemological errors are efforts to control other people to make them conform to one’s own expectations or needs (Dell, 1982). The notions of “denial” and “control” are certainly familiar; what is different about Dell’s application of these notions is his understanding of “reality,” which is, simply put, the coupled nature of human interaction.

From the perspective of structure determinism (a term coined by Dell, 1985), the fundamental reality of human existence is its biological nature, and that nature is “structurally determined” (Maturana & Varela, 1987). Human beings interact with the environment (including other human beings) in ways that are constrained by their biological structures: by their “bodyhoods,” or physiology (Maturana, 1988), and by their behavioral his-

tories. While their fates are not predetermined, the options people exercise in any particular situation are limited, or determined, by these physical and behavioral factors (which are inextricably connected within each person) (Maturana, 1988). At the same time, due to the plastic, dynamic nature of living systems, people change as a result of their interactions: their structures constantly adapt as they couple with objects inside and outside of themselves (Maturana, 1988; Burris, 2005). To be more precise, then, passive epistemological errors are refusals to acknowledge the organization of a particular living system, the “reality” of how the living system works; active errors are efforts to control other systems, to act on them for preordained effect when, in fact, “effects” are unpredictable outcomes of interactions that depend on each system’s peculiar and inescapably unique structure.

Dell’s (1980; 1981; 1982; 1985) understanding of family systems, which extrapolates from Maturana’s (1975; 1978; 1988) claims about human systems, applies, it seems to me, to classroom systems as well. I am assuming that classrooms, like families, are complex living social systems in which relationships—between teacher and individual students, between teacher and the student collective, among students, between teacher and subject matter, between students and subject matter, etc. (Burris, 1998; Hawkins, 2002; Noddings & Shore, 1984)—constitute the life of the system and trigger the individual and collective learning, or change, that goes on within it. As nested sub-systems, members of a classroom find their “fit” with each other, co-creating a larger system and enacting coherence just as families do, to greater or lesser individual and collective benefit. When classroom systems are pathological—that is, when their members repeat behaviors that prevent healthy growth, or the desired learning—it follows that successful adjustments, those that encourage more effective interactions, must “go with the reality” of the classroom as all of the members have constructed it. Going with the reality entails detecting the epistemological errors that are being made and subverting them so that the system members can evolve new behaviors that support the kind of learning they are in class to do.

For most people raised with an Aristotelian—that is, objectivist—perspective (Dell, 1980), which perceives reality as “out there” rather than co-constructed and interaction as fundamentally unidirectional rather than mutually constituted, epistemological errors are almost impossible to avoid. Teachers, of course, are no exception. This paper discusses two epistemological errors commonly made in classrooms: the “passive” error of emphasizing content over relationship and the “active” error of attempting to “control” students through unilateral classroom management techniques. These two approaches to teaching qualify as epistemological errors only when viewed from a systems perspective, a perspective I assume is familiar to

my readers. In highlighting these two errors, and in applying an explicitly systems perspective to them, I ultimately make the claim that, given the unavoidable clash between the objectivist worldview with which most teachers enter the classroom and the dynamic, nonlinear way in which classrooms work—in other words, given the inevitability of epistemological errors in teaching—classrooms, like families, can use “therapy,” too.

Content over Relationship

It is not difficult to see that a content emphasis—one that defines learning as the acquisition of information and skills relevant to a particular academic discipline—rests on at least the following assumptions:

- that information has its own independent existence outside of the student;
- that knowing is solely brain-based;
- that knowing is an individual experience and learning is social insofar as information is passed from one individual to another;
- that teaching is the provision of information and learning is the absorption of that information.

These assumptions are so prevalent in Western culture that they seem almost intuitive. But the systems approach contradicts every one of them.

For one thing, living systems do not “use” information. In fact, “there is no such thing as information” (Dell, 1985, p. 6) for a living system, since what counts as information is determined by a person’s perceptual capacities and inclinations. Because individuals select and couple with stimuli according to their own physical and emotional structures (Maturana, 1975; 1988), “information” can have no absolute, objective existence apart from the system that specifies it. Furthermore, the specifying system can be an individual or a collective: the private sense-making that individual students do can be transcended by the shared understandings that emerge within the group as a whole (Davis & Simmt, 2003; Davis, Sumara, & Luce-Kapler, 2000).

While the brain is a crucial component in the human living system, it is an “organizing embedded sub-system” (Rudrauf, Lutz, Cosmelli, Lachaux, & Le Van Quyen, 2003, p. 39) that both influences and depends upon its context (the human body and the surrounding environment). Brain functioning contributes to “embodied action” (Varela, Thompson, & Rosch, 1991), or cognition, but it does not fully account for the whole of conscious experience (an “explanatory gap” that has been dubbed the “hard problem” of consciousness—see Chalmers, 1995). Because of the embodied nature of human cognition, Maturana (Maturana & Varela, 1987) and Varela (Rudrauf

et al., 2003) prefer the term “mind,” which encompasses both neural processing (brain activity) and conscious, subjective experience and “cut[s] across brain-body-world divisions” (Thompson & Varela, 2001, p. 418). Whereas objectivism reifies the split between the body (the physical mechanism) and the mind (the thinking mechanism), systems theory collapses it, recognizing that abstractions such as thought and language take place in, are inextricably anchored in, the concrete reality of the body (Johnson, 1987; Maturana, 1978).

Learning, then, is not as simple as receiving information into one’s brain and capturing it for posterity in a flesh-and-blood computer. More accurately, learning *and information*, or content, happen through interaction—that is, people (including their brains) constantly change as they interact with the world around them (which they also specify through their structure-determined perception), and so do the ideas they generate. It is in *relating* to people and texts and ideas that individuals learn; it is through these relationships that individuals embrace and change content and, importantly, help to generate innovative *collective* knowledge (Davis et al., 2000; Davis & Simmt, 2003). Content and relationship, knowing and action, co-exist: the former emerges out of and resides within the latter (Davis, Sumara, & Kieren, 1996; Fogel, 1993).

But, while learning depends on relationship, there is not necessarily a one-to-one correspondence between interaction and learning. Change can be a highly complex process for humans. At one level of structural coupling (what Maturana, 1975, calls the “second phenomenological domain”), change can be automatic: people adapt instantly and largely unconsciously to new ideas and situations, always, as Dell (1982) tells us, seeking a new steady state. At the level of consciousness (what Maturana, 1975, calls the “third phenomenological domain”), where learning is encoded in language (and hence becomes accessible to further interaction and learning), a certain degree of awareness is required. This awareness of learning, or metacognition, affects the actions, or cognition, the learner is capable of (and vice-versa), but can be hard-won. While students can easily learn school routines at the unconscious level of automaticity, they can resist learning at the conscious level. The more deliberately conscious students are of their learning and the more assiduously they attend to its organization, the more creative and productive, perhaps, their ongoing interactions will be—interactions from which even greater creativity can emerge at the level of the group. Seen from a systems perspective, then, learning is much more complex than the simple sharing of data. It is a dynamic, recursive process that involves multiple layers of experience: the unconscious, the conscious, and the collective.

What, then, should teaching look like in a complex living system such as a classroom? The question is impossible to answer definitively, as teaching (and learning) will always look different depending on the teacher, the students, the day, the moment. What is certain is that the systems approach provides an answer that is very different from that assumed by the content approach. At the very least, the systems perspective suggests that a teacher's focus should be on facilitating *relationships*—with students, between students, with the subject matter and the world it represents.

If a teacher is to facilitate relationships in the classroom, she must know her students. This means she must be willing to recognize who they seem to be at every moment, for better or for worse, and to see and hear them as clearly as she can (Burris, 1998). She must be willing to reflect all this back to her students, acknowledging her “partial perspective” (Haraway, 1991), while simultaneously facilitating the co-creation of a consensual frame that allows for the type of academic learning that must take place in a classroom. At the same time, she must enact more private relationships: she must have a healthy, even passionate, relationship with the content she is teaching; she must know herself—her psychological and social inclinations, the buttons students can push, etc.; and she must be able to “reflect-in-action” and “reflect-on-action” (Rodgers, 2002). A teacher who focuses on cultivating relationships can better push students, for by intuiting their organization (both individually and collectively), she can connect with them in more informed and possibly effective—that is, life-changing—ways.

To emphasize content over relationship, then—to apply pressure to “cover” content in a specific period of time, to insist on testing content knowledge through standardized tests, to count short-term memorization of facts as knowing, to define learning as the acquisition of bits of information or the practice of isolated skills—is to commit a “passive” epistemological error. It is to deny a very complex reality: that cognition is a biological phenomenon, enacted through interactions, or relationships, with human, inanimate, and conceptual others whose existence arises out of that very interaction. It is to deny that “information” is what happens in interaction, that meaning is ascribed to experience (not inherent in it) by language-users, that language use itself is participation in elaborate games (Wittgenstein, 1965) in which we tell and retell stories about reality, that the fundamental reality is our proclivity to bond in structurally determined ways with others, living and non-living, so as to maintain our own organization and existence. It is to deny that learning is change (and awareness of change) and that teaching is the extraordinarily difficult and delicate task of occasioning that change through full-bodied commitment to relationship—to fear, anger, love, disappointment, and, at best, exultation.

Classroom Control

The notion that teachers can—and must—control students if classroom activities are to succeed is common in schools and forms the foundation of many a classroom management system (Kohn, 1996). The assumptions underlying this notion stem from a mainstream objectivist stance:

- that cause and effect make control possible;
- that teachers can cause students to behave in a certain way;
- that teachers can cause students to learn certain things;
- that chaos, or lack/loss of control, is necessarily bad.

From the systems perspective, these assumptions are erroneous. As has been discussed, the fundamental reality of human systems is their structurally determined nature. The relationships that humans enact are mutually accomplished, minutely sensitive to nuance, extremely creative, and, importantly, non-linear—they cannot be described accurately using linear terms such as cause and effect. The terms we can use emphasize the cooperative, collaborative nature of human interaction, terms like “coparticipation” (Hanks, 1991), “co-regulation” (Fogel, 1993), “structural coupling” (Maturana & Varela, 1980, 1987), “consensual frame” (Fogel, 1993) and “coherence” (Dell, 1982), and allude, once again, to the structurally determined nature of human beings. As Dell (1982) puts it,

individuals always behave out of their coherence; they can behave in no other way. Control is impossible. Their coherence determines how they will behave, and no amount of determined attempts to control them can ever change that fact. Moreover, an individual’s coherence specifies his reaction to the other’s attempts to control him. The coherence will, in most cases, ‘respond’ in a different way than was intended by the attempt to control. You can lead a horse to water, but you cannot make it drink. (p. 37)

It follows, then, that teachers cannot independently cause students to behave in a certain way or to learn certain things (the second and third assumptions in our list above). While Kohn (1996) bemoans teachers’ attempts to force compliance because of the implicit disrespect to students, systems theory states that teachers are actually *unable* to force compliance—it is “ontologically impossible” (Dell, 1982, p. 11).

But how are we to explain the distinct experience of being able to control outcomes? When I tell a student to sit down and he sits down, is that not a matter of cause and effect, of control? When I teach my third graders how to make a bar chart and they succeed at making bar charts, am I not controlling their learning? No, says Dell (1982). What I am doing is perturbing the system with which I am interacting (in the first case, a student; in the second, the entire class) in such a way that the system itself specifies an action that corre-

sponds with my initial desires, thus causing in me the “psychological experience of ‘causality’” (Dell, 1982, p. 9). I have *influenced* the system; I have not controlled it. In a living system, all components, or actors, constantly respond to and influence the others in an ongoing, historically reinforced dance that constitutes a “consensual frame” (Fogel, 1993) or a “consensual domain” of structural coupling (Maturana, 1975; 1988). As a participant in the co-construction of a classroom’s consensual domain, my actions can invite actions from others (and theirs from me), but the nature of others’ actions is never determined by what I do, only by their own particular structures.

All of this should not discredit the need in most of us, and certainly in teachers (and even in students), for the “psychological experience” of control. Teachers *do* sometimes want students to sit down; many of them *do* want their students to understand how to make bar graphs. The error is not in seeking this cooperation; it is in assuming that a teacher’s unilateral actions can *force* this cooperation. A classroom management technique can only work if the entire class agrees that it will, and this agreement holds fundamentally at the level of enactment, of relationship. Of course, teacher-student cooperation can rest on relationships of fear, indifference, or contempt just as easily as they can on enthusiasm, trust, and respect. The systems view urges us to consider just how we are accomplishing our sense of control in our classrooms and to confront the hidden messages that accompany our chosen methods.

If, from a systems perspective, teachers can neither cause students to behave in a certain way nor cause them to learn certain things, what can they do? They can enact relationships with students that influence their learning. These educative relationships involve, as has been mentioned, self-knowledge, knowledge of the students, knowledge of the subject matter, and, importantly, a feel for how to put all this knowledge together into effective “pushing”—that is, as Dewey (1932/1990) puts it, “taking hold of [the students’] activities, ... [and] giving them direction” so those activities are not “left to merely impulsive expression” (p. 36). Students, if they are to learn, must engage in such educative relationships. It is out of these relationships that the sense of classroom control emerges; students and teacher “co-accomplish” this sense through interaction, which is based on the relationships all members of the class are constantly enacting (Burriss, 1998). The systems focus on relationship gives teachers a way to “control” classrooms that corresponds to classroom “reality”: a commitment to engaging with the students and with the topics under study in such a way that cooperation—and learning—can organically emerge.

Such engagement is not necessarily easy, nor can it be prescribed. For one thing, the large student loads shouldered by most public high school teachers makes the notion of cultivating educative relationships with every

single student appear ridiculous. The assembly line approach to education precludes the relational one—and sets the stage for classroom pathology. For another, the scope of the relationships teachers can enact in a classroom is necessarily limited by the structure of each actor in the system, and individuals' structures are heavily influenced by experience over time. Mismatches and sheer failures can and will occur, whether they are due to cultural differences, personality clashes, prejudices, unmet expectations, blind spots, or just plain inability or unwillingness to relate. The lesson of systems theory is not to impose a norm on all classroom relationships but to recognize the unique influences that constitute teaching and learning *in a particular classroom* and to contemplate ways to understand and alter them.

The conclusion that unilateral control is impossible shifts our picture of the entire educational enterprise. It suggests that schools are places where teachers and students can, through healthy, educative relationships, improve themselves. This self-improvement can happen through interacting with people and ideas that present themselves in ways that allow for experimental interaction. Again, if we are to influence our students, "*we must fit ourselves to the situation*. We must fit our structure to the structures with which we are dealing" (Dell, 1982, p. 9, emphasis in the original). If the ideas that teachers value and hope to teach are to influence their students, the ideas, too, must fit themselves to the situation—that is, teachers must foster the conditions under which students can structurally couple with those ideas. Teachers must, as Dell (1982) puts it, "go with the reality" (p. 31)—discover their students' and their class's organization and effect coherence through informed, if experimental, action. The best teachers already do this; systems theory confirms the wisdom—actually, the biological necessity—of doing it.

It is interesting to consider the final assumption underlying the objectivist definition of control in this light. If a teacher is to allow her students to feel their way into structurally coupling with her, each other, and the ideas that are central to a discipline, she must be willing to embrace uncertainty and to expect, at times, chaos. In aiming for the *edge* of chaos, where the most productive communicating (and thinking?) presumably takes place (Waldrop, 1992), teachers will occasionally overshoot. But, contrary to the objectivist assumption, chaos is not necessarily bad. With the right sort of structure and with energy enough, new order—greater sophistication and complexity—can, possibly, arise.

By now it should be clear that, from the systems point of view, efforts to control classrooms are "active" epistemological errors. Teachers can—and should—have the "psychological experience" of control (Dell, 1982), but their success at getting students to do what they want is due to something far more complex than simple cause and effect. Rather than putting their

energy into forcing obedience and learning, teachers can, rather, hone their observational skills so as to more sensitively enact relationships with their students (and structure their classrooms so as to afford themselves time to observe); teachers can practice the art of being authentically “present” (Rodgers, 2002) to students, experiencing and noticing themselves moment-to-moment and accepting and working with their students’ moment-to-moment experiences in turn; teachers can earn their students’ respect and trust through a history of consistent, thoughtful interactions, working through resistance and other negative emotions to mutually satisfying cooperation; teachers can design activities that facilitate students’ engagement with content and with each other. This is what “classroom management” is all about: being able to enact healthy relationships with people and ideas that lead to self-improvement, to the change I am calling learning.

Conclusion

In truth, making epistemological errors is only human. After all, how many of us are capable of always recognizing and accepting reality, no matter how it is defined? What is any given reality anyway; how do we infer a social system’s organization? And how can one person—namely, a teacher—fully or effectively understand the reality of a classroom?

A starting point, systems theory suggests, is to turn our focus away from individuals—individual students, individual bits of content—and onto the relationships that are enacted among them. The relationships hint at the contours of the underlying organization of a classroom—what the actual components are (including content), what roles get to be played by which components, what roles *need* to be played if the classroom system is to retain its identity, what that identity is in the first place—and hence help us to grasp classroom “reality.” And, just as family systems can require therapeutic interventions that encourage healthier behavior for all, classroom systems, presumably, can benefit from similar attention. Accepting the primacy of relationships in complex living systems and recognizing that a system’s organization—the teacher’s, the students’, and the classroom collective’s—enables and limits teachers in their interactions can lead to two notions: (1) that teachers could use some “professional” help in getting a handle on their classroom’s organization and (2) that they could alter their own behavior to invite changes in their students that amount to the desired academic learning.

Dell (1982) warns that, given the nature of living systems, therapists can naturally achieve a coherence with their clients that restricts their growth capacity due to the inherent limitations of the therapist, the clients, and the consensual frame they enact. The same must be true for classrooms: Just as

with any relationship, teachers and students function with blind spots that prohibit them from seeing what they are not structured to see. In the therapeutic field, supervisors often review with therapists their work with clients, offering an alternative perspective from outside the coherence, or consensual frame. The supervisor's suggestions can help the therapist subvert the current coherence by encouraging slightly different interactions with the clients that invite novel behaviors from them. The same approach might be useful in classrooms if teachers are to continually interact with people and ideas in ways—possibly unfamiliar, possibly uncomfortable—that support change in all students.

To do this—to apply ourselves to the challenge of better “fit[ting] ourselves to the situation” (Dell, 1982, p. 9)—requires a fundamental paradigm shift in the field of education from objectivism to the systems perspective. As I mentioned earlier, the best teachers are able to “fit” naturally, but some are not. If individuals can seek therapy to help themselves change, why not classrooms?

The therapy I refer to here is not psychoanalysis; it is holistic analysis of a dynamic social system. It is understanding the relationships that constitute a social system and exploring the human elements that contribute to those relationships: emotions, intuition, love, awareness, etc. (Burris, 1998). It is considering thoughtfully what “learning” is: what kinds of changes teachers should encourage in themselves and others, what kind of person any of us hopes to become. It is developing the capacity in teachers (and in their supervisors) to discern pathology in classroom interactions and to ameliorate it. The groundbreaking work of Maturana and Dell's courageous application of systems ideas to family therapy have opened the way for educators to make this paradigm shift for themselves: to reduce their epistemological errors and “go with the reality” to enhance learning in their classrooms.

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