Quantum Counseling: A New Perspective for Professional School Counselors

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Abstract

Professional school counselors find themselves working in school organizations that are antiquated and are not a natural fit to the actual work of the counselors. However, lessons being learned from the new sciences and open systems perspectives may shed a great deal of light as to how schools can be restructured in order to best utilize the talents of professional school counselors. This article will begin by showing how schools are currently structured and subsequently flawed. This introduction will be followed by a brief description of the lessons of the new sciences. We conclude by discussing the implications and applications of these new lessons as they relate to school organization and to the work of school counselors.

Quantum Counseling: A New Perspective for Professional School Counselors

Current educational practices, such as organizational structure, pedagogy and assessment, and even counseling, are based upon lessons learned from Newtonian or classical physics. While these sciences are strong, their application by practitioners is wrong. The approach is flawed in that it is an inappropriate method to look at human, social, and dynamic systems. It is very appropriate for the study of closed systems like machines and clockwork mechanisms. But, as Margaret Wheatley (1994a, p. 29) posited, “A mechanical world feels distinctly anti-human.” A model derived from lessons learned in quantum physics and the other post-modern sciences is more appropriate. Quantum physics and the other new sciences include a set of scientific principles and approaches that are more conducive to studying open systems, such as the environment, social systems, and people. The traditional view is more rational and linear, whereas the new view is more intuitive and multifaceted. Again, the past view is more reductionistic and encourages competition, whereas the newer thinking is more holistic and encourages cooperation. While classical or Newtonian physics is an excellent science, it is not the science to be used in order to understand us and the organizations in which we work. Important lessons from the newer sciences can have immediate application for professional school counselors.

The aim of this article is three-fold. The first is to explore the flaws of basing contemporary practices using an irrelevant scientific framework. The second is to establish a new scientific framework in which to base practices of professional school counselors. And, finally, to provide some ideas of application for practitioners.

Classical Thinking

The classical sciences seemed to provide the opportunity for scientists to better understand *things*. As the scientific method explicitly suggests, if you can just break down the complex whole and study its parts individually, you can understand the whole and make predictions about the future. You can then provide an algorithm for success

and for subsequent replication. Unfortunately, scientists and theorists in other fields have taken these fundamental principles of Newtonian physics and applied them to fields that don't fit the approach. For example, in psychology, behaviorists like John Watson and B.F. Skinner applied this classical model of mechanistic linear prediction to the study of human life and behavior. In education, Abbott and Ryan noted, "As rapidly industrializing nations created education systems for the masses, these systems reflected the industrial factory model. When universities gave advice on the curriculum, they suggested a highly reductionist model of learning (1999, p. 69). However, the science is inappropriate, here. Physicist Henry Stapp (1993) stated,

> The behaviorists sought to explain human behavior in terms of certain relatively simple mechanisms, such as stimulus and response, habit formation, habit integration, and conditioning of various kinds. It is now generally agreed that the simple mechanisms identified by the behaviorists cannot adequately account for the full complexities of human behavior. (p. 13)

The flaw lies in the belief that people can be dissected and understood and controlled like machines. It does not take into account the human equation. It does not take into account how the parts affect the whole in interconnected ways that cannot be measured in isolation. It does not take into account the incomprehensible interconnectedness of the relationships within the whole. It does not fit the study of humans and their organizations.

Classical Schools

While many professional school counselors understand and attempt to counsel using post-modern approaches, our school systems remain profoundly influenced by the Newtonian way of thinking. Our schools are clearly organized and structured in a classical model. Likewise, our curriculum and instruction, and assessment of students also have very strong ties to Newtonian physics.

School systems are purposefully structured to be rigid and inflexible. Max Weber designed modern bureaucracies and Frederick Taylor made them a science. The hierarchy is a top-down model wherein different silos are aligned for efficiency and standardization. Individual schools are mini-versions of this same hierarchical structure. Curriculum and instruction are similarly impacted as there is renewed interest in state and national curricula. Standardized testing is currently seeing its role expanding, and the No Child Left Behind law demands structure. The expedience of behavioral pedagogy typically wins out over the time-consuming teaching approach of constructivism.

Even professional school counselors have been impacted at the theoretical level since much of their training has followed the formal tenets of the classical sciences. In the words of Rachel Lauer (1998):

> The science which most students [of psychology] are taught is based upon the brilliant but more mechanical orientations of Descartes and Newton of the 16th and 17th centuries… The Newtonian paradigm of science represents one model of thought or pattern of perceiving, evaluating, deciding and acting. Scientific hypotheses, collecting data, experimenting, analyzing, quantifying, etc. Students' reports and interventions reflect this orientation. (p. 96).

While traditional scientific thinking still permeates critical components of our schools, there is hope. The lessons we are learning from quantum physics and the other new sciences support many of the more intuitive notions we already feel are best practices and also give rise to new thinking that may fundamentally change how education is approached in this new millennium. "In the new science, the underlying currents are… giving primary value to the relationships that exist among seemingly discrete parts" (Wheatley, 1994a, p. 9).

Quantum Thinking

Just what is quantum physics? Quantum physics can best be defined as a "statistical theory that deals with probabilities" (Stapp, 1993, p. 14). It looks at the interconnectedness of the universe at the subatomic level. Its language is the more intuitive and qualitative mathematics of patterns and relationships. Perhaps a theoretical example from the quantum sciences and one from another newer science will help.

Bell's Theorem is also known as non-local causality. This experiment was done mathematically before it was verified in the laboratory. What John Bell discovered was the idea that you could pair together two electrons. Once they were paired together, you could separate them at macroscopic distances. After they were separated, the experimenter/observer could change the spin of one of the electrons. In a most interesting twist, the other electron would instantaneously change its spin in a corresponding fashion even though it could not "see" the other electron. Physicist Victor Mansfield and Jungian analyst J. Marvin Spiegelman (1996) explained,

> Surprisingly, *this instantaneous interaction or dependency occurs without any information or energy exchange between regions A and B* [emphasis in original]. The effect occurs without a definite cause—a truly a causal connection… We understand this interconnectedness in terms of effects propagating faster than the speed of light. (p. 193)

How could this be? We are trapped by our limited, classical thinking. It is *apparent* that the two objects are separate, but that is the trap. The two objects are not necessarily two objects, or separate. They are interconnected, or one object. "It is a quantum loophole through which physics admits the necessity of a unitary vision" (Jaworski, 1996, p. 79). The interconnectedness and relationships are the center piece to this quantum world, and communication is the glue to these relationships. There is not an observer separate from the observed. The observer and observed, the professional school counselor and the student, are linked together as part of the whole.

From Bell's Theorem, and from other quantum experiments, we learn of the unifying context of nature. We are not separate; we are interconnected. Isolating by measurement of individual parts does not give us a better understanding of the whole. The whole can only be understood by examining the entire system in a unified fashion. This is in contrast to the lessons learned from the conventional sciences. In the past, we learned of the importance of: reductionism, objectivity, control, replication, and prediction (Rettig, 2002).

Chaos theory proves to be yet another interesting insight into the mysteries of dynamic systems. Classical thermodynamics taught us that a system's optimal level is equilibrium. In other words, all systems strive for equilibrium or homeostasis. Because we have been such good students of the classical sciences, we have learned to strive for equilibrium in our organizations (the hallmark of bureaucracies and standardization). We wish to maintain consistency and control where everything is static. However, in chaos theory we learn that equilibrium is a state of entropy—the state where systems begin to die. When a system becomes static, it does not create or evolve, so it dies. But when a system fluctuates and makes changes, it *appears* to be in disorder or chaos. Yet, as Capra (1996, p. 190) posited, "In the new science of complexity… we learn that nonequilibrium is a source of order."

As has been mentioned earlier in this article, human organizations are not closed systems like machines, rather they are open systems. Margaret Wheatley (1994a) explained:

> Open systems don't sit quietly by as their energy dissipates. They don't seek equilibrium. Quite the opposite. To stay viable, open systems maintain a state of non-equilibrium, keeping the system off balance so that it can change and grow. (p.78)

What might *appear* to be disorder or chaos really has an underlying order. What the observer needs to do is allow for the order to appear. What might appear to be

disorder is really a profound order. We humans are only able to see a small part of the system in terms of time and space. We do not see the system in its entirety. We are not trained to do so. In a remarkable insight by Emery and Trist, Neumann (1997, p. 93) paraphrased, “Only in benign environments are social structures able to manage some semblance of equilibrium. In turbulent environments, however, the social structure must… remain far from equilibrium.”

There are two primary lessons we can take from chaos theory back to our schools. First, people need to be patient when things appear to be chaotic. We need to take the time to let patterns develop, and to look over the entire system, or person’s environment, for these patterns or themes to emerge. The term “space” refers to the entire organization or personal environment. We must look beyond our own departments or individual classroom settings to see the interconnections (Gelatt, 1995) and relationships. The term “time” refers to taking more than the typical snapshot of time in which we make our observations. That’s why so much of what we see appears to be chaotic. A glimpse of living things can appear to be chaotic. But, over time, patterns or themes tend to emerge and show themselves. So, when trying to understand a troubled student, if we look at the child over space and time, we are more likely to better understand the order out of chaos.

The second lesson from chaos theory is no less important. “A small fluctuation may start an entirely new evolution that will drastically change the whole behavior of the macroscopic system. The analogy with social phenomena . . . is inescapable” (Prigogine & Stengers, 1984, p. 14). That is to say that the most apparently insignificant issues can create major changes. One person or small event can indeed make an enormous impact. Even more, the observer [counselor] can’t help but impact the observation [counseling process]. Mansfield and Spiegelman warned, “The unconscious is invisible, pervasive, and continuously influencing consciousness, even without our knowledge of the process” (1996, p. 188). However, in terms of our new understanding

of these quantum sciences, professional school counselors can now change their interactions with their students. Mansfield and Spiegelman continued, “This relationship produces a diminishing sense of separateness and independence between the analyst and analysis and . . . . Now, rather than causal interactions there are acausal expressions of meaning” (1996, p. 194).

Quantum Schools

Quantum physics and the other new sciences have taught us some valuable lessons—if we listen. Some of these lessons seem to make common-sense, and so they support the work that many people and organizations are already doing. Other lessons are counterintuitive, and they make us strain to understand their meaning and application. Some of these require a great “leap of faith” while others feel more natural. In any case, a summary of these more broad key lessons follows (Rettig, 2001):

People and systems are subjective.

Objectivity is an illusion, and measurement is subsequently subjective. *How* we see the world is less a matter of reality than a matter of *what* we choose to see. However, we help to create reality by our participation. Observation is a form of participation. We cannot be separate from what we observe. “Quantum mechanics is fraught with certain paradoxes, but these are paradoxes only when we look at them from the point of view of scientific realism—that reality exists independent of us, the observers” (Goswami, 1996, p. 51). This notion is critical for professional school counselors who must understand the impact of their very presence in the counseling and education environments. From Bell’s Theorem we learn that the effects that our measurements are designed to measure may well not draw a direct line back to a particular cause. Mansfield and Spiegelman (1996) reasoned,

> We must now abandon our servitude to strict causality, the idea that all events have some well-defined set of causes and that the same initial conditions always generate the same effects. Now we must learn to

> appreciate that although nature is structured and lawful, it is acausal. (p. 192)

All of nature is unified and interconnected.

We are part of nature and are thus interconnected with all of nature and each other. “The implications of this are profound. . . . the physical world is an inseparable whole” (Gilman, 1996, p. 12).

> This concept supports the point that we are part of what we observe, not separate from it. How can we be interconnected with what we are observing, yet not influence it? “We have finally come to see the world as a single, albeit complicated, system, one immense set of interrelated pieces” (Lipman-Blumen, 1996, p. 78).

A web of relationships is central to this unification.

Just as living systems are integrated wholes, so too is everyone and everything interrelated. Therefore, identifying and embracing the web of relationships internal and external to the system is imperative. Everyone receives their identity from each other, and in turn, create the identity of everyone else. Measuring by taking apart the whole to observe individual parts, takes us further away from reality. The whole can only be understood by looking at the whole as a system; it needs to be observed over the breadth of time and space. For professional school counselors, over time means just that. Counselors must obviously look for emerging themes of behavior over days, weeks, and months. Over space refers to looking at the child in all the competing in-school and out-of-school settings.

Changes at the local level can make huge impact at the system level.

Because small fluctuations can have huge impact on dynamic open systems, one person or small event can be instrumental in change or have dire consequences. Margaret Wheatley (1994a) said it best: “Our activities in one part of the whole create

non-local causes that emerge far from us" (p. 42). Something that seems apparently innocuous can wreak havoc in a child's life.

Application of the Lessons

Now that the lessons from quantum physics and the other new sciences have been identified, let's turn our focus to application of the lessons to the practices of professional school counselors. Gerstein and Bennett (1999) assist in an understanding of the application of these concepts by positing that a systems perspective has a great deal in common with a quantum paradigm. There is a growing body of literature supportive, to varying degrees, of professional school counselors moving away from an individual student focus toward adoption of a broader systems perspective. Martin (2002), in discussing the Education Trust's Transforming School Counseling Initiative, indicates that "with a school-wide perspective, school counselors are in the best position to assess the school for systemic and other barriers that impede academic success for all students" (Why focus on school counselors? p. 4). Stone and Martin (2004) echo this sentiment in indicating that through their collaborative function, school counselors can "identify broad system-wide practices that contribute to inequitable situations or enhance practices that reduce inequitable situations for individual students and groups of students" (p. 16). The new American School Counselor Association (ASCA) (2003) National Model places a high emphasis on the overarching themes of leadership, advocacy, collaboration and teaming, and systemic change. ASCA emphasizes systemic change in their definition of the professional school counselor as a leader: "School counselors become effective leaders by collaborating with other professionals in the school to influence system-wide changes and implement school reform" (p. 24).

There are many reasons why assuming a broader quantum perspective is vitally important for school counselors. It is only through observation of the whole system that parts may be understood (Gerstein & Bennett, 1999). Keys and Lockhart (1999) caution that many of the problems that exist in schools today are too complex and

multidimensional to be solved through individually-targeted interventions. The general futility of the individual approach is emphasized in their observation that “it is not uncommon for school counselors to expend considerable energy helping a student develop new ways of thinking, feeling, and behaving only to become discouraged when changes are not sustained by the family, or neighborhood systems, or even teacher or administrator subgroups in the school” (Systems Theory, p. 5).

While these many sources maintain the importance of focusing on system-wide perspectives and interventions, a central question that remains is what constitutes the system. Is it a particular subgroup within a school? Is it the school itself? Is it the community within which the school exists? Is it the larger domain of state and national education reform? We would posit that it is essential that any conceptualization of a system be expanded to include the latter components. As indicated earlier in this article, there is an inherent danger in limiting the conception of a system to a school as a singular entity, just as there is a danger in conceptualizing clients in isolation from their environment. Gerstein and Bennett (1999), in presenting a quantum framework for mental health counselors, state:

> Knowing the bigger picture of how the client(s) interact(s) with the larger system increases the possibility that the MHC [mental health counselor] will succeed in facilitating the desired change. Stated another way, MHCs must first see the forest before they can view the trees. If MHCs compartmentalize the behavior of the client and perceive the client apart from his or her system, the MHCs vision will become blurred and distorted. As a consequence, clients will not change. (Counseling Implications Based on Quantum Physics, p. 5)

If one attempts to view a school and its related strengths and problems in isolation from its environment, then the school is being viewed as a closed system. Isolated and erroneous conclusions may follow that fail to take into account the dynamic and

complex interchange between students, faculty, school, community, and family. For example, it would be improper to conclude that individuals and groups within the school can be dissected in isolation in order to be understood, and once "understood," their behavior explained with certainty.

The Harwood Institute's (n.d.) Reconnecting Communities and Schools Initiative is an example of an approach that recognizes the necessity of a broader quantum perspective. This initiative states that "schools will succeed only if they are *part* of the community" (How Can We Reconnect Our Communities and Schools?, p. 2). The initiative seeks to move communities past pointing fingers at schools for failing in many regards, and move schools past existing in isolation from the communities in which they are embedded. One of the initiative's guiding principles stresses this concept: "Let's move from being 'consumers' of public education to 'citizens.' We must shift our frame of reference from 'What are *you* (the schools) going to do?' to 'What are *we* going to do?'" (New Guiding Principles, p. 1). Keys and Lockhard (1999) propose an expansion of the professional school counselor's consultant and coordinator roles that is aligned with a quantum perspective. These expanded roles include school-community liaison, integrated services team member, group process facilitator, systems change agent, and family advocate. These authors propose that a shift in the school counselor's role toward being a facilitator of multi-systemic change necessitates "a shift in emphasis from a direct to an indirect services model" (School Counselor's Role, p. 1). This is both a necessary expansion and shift from the American School Counselor Association's (1999) view of the role of the professional school counselor, which while recognizing and affirming the consultation and coordination roles of the school counselor, places a primary focus on "direct services to students, staff, and families," with a recommendation of 70% of a school counselor's time spent in "direct services to students" (ASCA Position Statement, in Remley, Hermann, & Huey, 2003, p. 577). It should be noted, as stated earlier, that the ASCA (2003) National Model does place an

importance on the themes of leadership, advocacy, collaboration and teaming, and systemic change. These components are stressed while many of the intervention efforts of school counselors are limited by the contingencies of their settings, such as limited repeat contact with students, and isolation from families and communities. It is likely that many school counselors still place primary emphasis on the direct service to students component of their work, despite the fact that they would be more effective agents of change if they conceptualized and intervened at a broader systemic level.

While emphasizing a broader quantum view, it is not possible to examine this concept in isolation from the current educational reform movement that places a primary emphasis on accountability. The advocacy for a quantum perspective is in no means meant to indicate that accountability is inappropriate or undesirable. There are, however, important considerations and dangers. There is clearly a strong push for school counselors to utilize data to guide decision-making, promote programs, and demonstrate outcomes in regard to student success (Krantz, 2004; Stone & Martin, 2004). However, because school counselors have not traditionally used data in this manner, there is the strong risk that many school counselors will become focused on dissecting and on individual components within the school and in the process “lose the forest for the trees.” It is appropriate for counselors to use data, but is also important that along with “snapshot” data, a concurrent “picture over time” and larger systemic focus be maintained. Stone and Martin (2004) state:

> Data can be a powerful weapon in school counselors’ arsenals as they work to knock down systemic barriers and help students become successful learners. Using data helps school counselors change attitudes and beliefs, widen opportunities and identify institutional and environmental barriers impeding student success. (p. 12)

Another consideration in the use of data is that much of the change a school counselor facilitates is not readily observable, if at all. As indicated earlier, a central

tenet of chaos theory is that a person or small event can cause major changes within a larger system. This can be difficult to quantify or even demonstrate which is especially problematic in an age of accountability. Feeling this pressure, many school counselors may resort to quantifying the most readily available information versus larger systemic change aspects. While this may result in school counselors winding up with a bundle of data that will, indeed, be helpful in justifying school counseling as a vital service in schools, but which, in some ways, does a disservice to the larger systemic changes in which they are involved. Professional school counselors should be ever vigilant for means by which their impact on the larger school and community system can be accessed. One possibility is the use of constituent focus groups, not as an advisory council, but as a means for generating focused discussions of impact and the state of the system.

Summarily, conceptualizing schools as open, dynamic systems necessitates looking at more than just the outcomes of that system in an atomistic manner. Since everything is networked together, we should focus our observations holistically, not on the measurement of tiny skill parts. We should also look for understanding over time, not discrete moments. However, we should also be cognizant of Margaret Wheatley's (1994) warning that "every act of measurement loses more information that it obtains" (p. 63). Measurement of humans is inherently subjective. Again, the observer or measurer cannot separate himself or herself from the measurement. The very act of observation influences the measurement. Indeed, by observing, we are helping to create reality. From quantum physics we have learned that every potential outcome is merely a probability. We can never know for certain the extent of our accuracy. So, all measurements should be taken with a grain of salt.

There are other issues that are readily applicable to professional school counselors. From chaos theory, Gelatt posited, "Chaos and creativity then become two sides of the same coin and a theme for personal reflection and self-renewal. This theme

may lead to new counseling strategies" (1995, p. 109). Counseling approaches which emphasize the client's expertise, such as solution-focused counseling, or that work toward the deconstruction of systemic influences, such as narrative therapy, appear to hold great promise for school counselors. Gelatt (1995) also indicated that "counselors and clients will need to learn to be as capable of change as their environments" (p. 111). From Bell's Theorem, Lauer (1998) provided a most insightful vision,

> The search for "laws" of human behavior is probably futile. Extensive research of individuals and groups will produce possibilities and probabilities, not certainties. Regularities found will vary with time, place, populations, and contexts as well as methods of observation. Human behavior must be seen in ever larger wholes (dyads, small groups, large groups, etc.). . . . We should not examine units such as "the child" without considering the larger contexts in which he/she is embedded. (p. 98)

There are a number of points that can be applied directly to the work of professional school counselors:

1. resist the urge to reduce, diagnose, treat, and, as a result, explain behavior;
2. students who come in for school counseling are representative of disequilibrium and chaos within the larger system—seek the connections and patterns that will emerge over time and space;
3. recognize and respect that schools are complex and dynamic organisms and resist the urge to view individual components, such as an individual classroom or student, as a discrete and isolated part;
4. all facets of a school and the community in which it is embedded are interconnected;
5. work to promote a respect for the interconnectedness of students, faculty, staff, and community;

6. emphasize direct and indirect interventions; recognize that interventions may not directly or neatly link back to a perceived causal event;
7. direct and indirect interventions may result in significant impacts on the system as a whole;
8. counseling and guidance programs are influencing factors within the schools, just as administration, teachers, students, families, and communities are;
9. maintain an eye on the health and functioning of the larger system, seeking and working to remove negative influences and barriers to student and teacher success;
10. consider the story of the elephant—if all you look at and see is the leg, you may miss the elephant—it is through observation of the larger system that the parts may be understood, not vice versa;
11. advocate for a school counselor role that includes serving as a liaison to the community in which the school is embedded, and serving as a systems change agent;
12. seek broader systemic measures that provide a “picture over time” to accompany “snapshot” data; and
13. respect the power of indirect interventions, such as consultation.

In sum, these new sciences have taught us that everything is interconnected and that creating relationships and networks is a central task of educators. Our organizations should be structured in such a way that encourages these connections to come and go as appropriate. The question should always be asked, “How is the whole system working together to meet the needs of the children?” The curriculum and instruction should focus on the children and encourage holistic and authentic learning with an emphasis on themes and patterns. Assessment of student learning should be done across space and time. In other words, many different types of measurement over time should be used. According to quantum physics and the other newer sciences,

much of what we already believe intuitively is sound educational practice. By making some necessary modifications in our system structures, our human connections, and in our school counseling strategies, we can make a huge impact on education.

This article is meant to be an introduction to a new way of thinking about working with educational systems and the people in them. For more detailed and intriguing insights into “quantum counseling,” the reader may want to read the articles by: Gelatt, Goswami, Lauer, and Mansfield listed in the following references. These articles are more technical than this article, but they may be groundbreaking in scope.

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Biographical Statement

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