



August 2013

Trading in our Paradigm Shifts for a Staircase

Diane Powers Dirette

Western Michigan University - USA, ot-ojot@wmich.edu

Follow this and additional works at: <https://scholarworks.wmich.edu/ojot>



Part of the Occupational Therapy Commons

Recommended Citation

Dirette, D. P. (2013) "Trading in our Paradigm Shifts for a Staircase," *The Open Journal of Occupational Therapy*: Vol. 1: Iss. 4, Article 1. Available at: <https://doi.org/10.15453/2168-6408.1067>

This document has been accepted for inclusion in *The Open Journal of Occupational Therapy* by the editors. Free, open access is provided by ScholarWorks at WMU. For more information, please contact wmu-scholarworks@wmich.edu.

Trading in our Paradigm Shifts for a Staircase

Keywords

paradigms, paradigm shifts, growth of knowledge

Credentials Display

Diane Powers Dirette, Ph.D., OTL

Copyright transfer agreements are not obtained by The Open Journal of Occupational Therapy (OJOT). Reprint permission for this Letter from the Editor should be obtained from the corresponding author(s). [Click here to view our open access statement regarding user rights and distribution of this Letter from the Editor.](#)

DOI: 10.15453/2168-6408.1067

Paradigms are scientific achievements that provide model problems and solutions to a community of practitioners (Kuhn, 1970).

“Paradigms gain their status because they are more successful than their competitors in solving a few problems that the group of practitioners has come to recognize as acute” (p. 23). Or, as Kuhn notes, the new paradigm more often offers the promise of success. The paradigm, however, may not actually solve the problems, and frequently it presents new problems for the profession.

The profession of occupational therapy (OT) has a history of embracing new paradigms without scholarly criticism of the ideas that make up that paradigm, and without knowing how those ideas might impact the profession. Quite often, these paradigms are presented as a way to “save the profession” from whatever crisis or potential crisis is at the forefront at that time.

Paradigm Shifts

According to Kuhn (1970), there is a cycle of accepting paradigms for a period of time, and then a crisis occurs, which is followed by a revolution of ideas that he calls “scientific revolutions.” Scientific revolutions are transformations of paradigms from one paradigm to another (Kuhn, 1970). One paradigm disappears when there is a conversion of the members of the profession to another paradigm. Members of the profession who refuse to convert to the new paradigm are “simply read out of the profession” through the profession ignoring their ideas (p. 19). Those who cannot comply with the new and more rigid definition of the profession must proceed in isolation.

These scientific revolutions have come to be known as paradigm shifts. When a paradigm shift occurs, the members of the profession view the old ideas of the profession as wrong and bad and embrace the new ideas as right and good. Scholars will discard old ideas and replace them with a new model of thinking that frames the problems and solutions being used by practitioners at that time. These paradigm shifts can cause divisions in the profession, as they require the members to disparage old ideas and embrace new ones without fully critically examining the pros and cons of the new paradigm.

Although the idea of paradigm shifts was not originally used to describe the applied sciences, we have seen similar phenomena in the OT profession. Within a couple of decades after the formation of the profession, the rehabilitation movement transformed OT from games, exercises, handicrafts, and work into constructive activities, activities of daily living, work simplification, and the use of adaptive equipment and prosthetic and orthotic devices (Gilfoyle, 1984; Howard, 1991). In the 1960s, in both Canada and the United States, changes in the involvement of the federal government in health care reimbursement lead to the biomedical model of OT (Jongbloed & Wendland, 2002). The rehabilitation movement and the biomedical model integrated OT into the health care systems and created a means for reimbursement of OT services. This, of course, made OT a viable profession and lead to a great expansion in the number of people we, as OT professionals, are able to serve. The problem, as we see it now, is that these movements restricted our

services to health care based settings and to some extent limited the types of treatments, and focused our treatments on performance components (Cooper, 2012).

In response to the limitations of the biomedical model, the profession underwent a paradigm shift to models that were more focused on occupations. Some of these models include the Model of Human Occupation (Kielhofner, 1985), occupational science (Clark et al., 1991, Yerxa, 1987), and the Canadian Occupational Performance Model (1997). This paradigm shift refocused the OT profession on occupations. In the process, however, the value of the biomedical model was disparaged by referring to it as “reductionism” (Cooper, 2012, p. 199).

Another paradigm shift resulted in our current model of practice. With the advent of limited funding from the federal government, the profession of OT faced another crisis. In order to continue to thrive, the profession shifted the paradigm around the year 2000 to evidence-based practice (EBP) (Holm, 2000). OT embraced EBP as a way to demonstrate the effectiveness of our interventions to third party payers and lawmakers. This paradigm shift brought OT back to a medical model of practice through a focus on the use of quantitative research as the basis of our clinical practice. EBP was accepted without criticism of the potential impact on the OT profession (Hinojosa, 2013), as many viewed it as necessary to save the profession. Study designs, such as ethnographic or phenomenological designs, that do not fit with the levels of evidence have been disparaged and viewed

Bedell, 2003). Recent publications are more likely to focus on EBP articles, and the voices of the last paradigm are less likely to be heard. Each time a problem has been faced by OT, the members of the profession seem to become susceptible to a paradigm shift in which they devalue the old ideas and overzealously embrace new ones without deliberate critique of the ideas of the new paradigm.

The Staircase

Karl Popper offers an alternative model of change in science. Through critical rationalism, he proposes that professions build on previous knowledge, rather than turn away from old ideas to embrace new ones. Each step in the growth of knowledge is based on a guess, or what we know in science-based professions to be a hypothesis. When, through the development of new theoretical information or applied scientific inquiry, a problem is found with a hypothesis, we build a better guess. As we climb the staircase, our knowledge grows to the point that we are practicing based on our best guess (see Figure 1). It is accepted that knowledge will always continue to improve. In this model, current knowledge should be viewed as “stepping stones,” or stairs in a staircase, that we climb up to reach the next level of knowledge. We do not discard previous knowledge or turn away from it in a paradigm shift. We build on it to generate better knowledge.

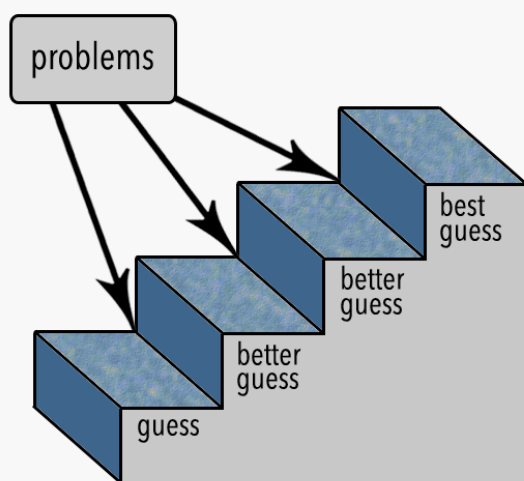


Figure 1. The staircase model

Change happens when a problem is found with the current knowledge. Popper (1960) states that, “It is the problem which challenges us to learn; to advance our knowledge; to experiment; and to observe” (p. 179). The problem can be a result of a clash between our theories and our observations. These observations are often facilitated by the development of better instruments that help us with our observations. For example, the growth of our knowledge of neurological interventions continues to be advanced by neuroscience and the development of instruments that have created a better understanding of the brain. Problems lead to the growth of knowledge through the generation of new theories that result in new problems of an ever increasing depth. We should not accept or reject scientific knowledge based on problems, but use those problems to build better solutions, or hypotheses.

Critical Thinking

Better solutions are built through critical thinking. All ideas should be open to critique, with both the good aspects and the bad aspects of the ideas being explored. One of the barriers to critical thinking is “the feeling that we should be ashamed of our mistakes, and should regret making them, since they must be the result of our incompetence” (Miller, 1985, p. 9). To the contrary, critical evaluation of our ideas demonstrates that we are willing to grow our knowledge base and advance our profession. According to Popper (1960), this critical procedure “contains those choices, those rejections, and those decisions, which show that we have learnt from our mistakes, and there by added to our scientific knowledge” (p. 178).

Two other barriers to critical thinking are authoritarianism and formalization of critical thinking (Popper, 1960). Too often, we, as occupational therapists, become attached to our ideas or the ideas of authority figures in the profession, and, as a result, we lack the ability to critique those ideas. We need to separate both ourselves and our authority figures from the ideas, so that we can critique those ideas and develop better ones, “for we cannot chew over what we have already swallowed or call into question what we have made our own” (Miller, 1985, p. 11). The ideas are not the person, nor are we ourselves the ideas. There is widespread respect for the work of the Bobaths, but exponential advancements have been made in neuroscience since they developed their neurodevelopmental frame of reference. We should acknowledge the groundwork they laid and build a staircase to better solutions. With an

attitude of separation, we should be able to critique not only the ideas of past authority figures in the profession, but also our own current ideas, thus allowing us to build better ideas.

We also have seen the phenomenon of formalization of critical thinking in the profession of OT. EBP has formalized our critical thinking and offered precision to the process, but it has also limited our critical thinking to one set of criteria to determine good research and, ultimately, good OT practice. Miller (1985) states that “if we confine our arguments to those that turn on empirical facts, then our conjectures must be further restricted to those that are empirically falsifiable” (p. 11). In other words, if we shift completely into EBP, we will have restricted our knowledge base and our ideas to only those that can fit within the EBP criteria. The model itself limits the scope of our ideas as well as the critique of those ideas.

Implications for the Profession of OT

As a profession, we have been too quick to jump on bandwagons; we have embraced authority figures and then failed to separate the ideas from the author; and we have adopted rigid structures for evaluating our ideas. Popper insists that, “the answer to our ignorance and to our fallibility lies not in pretending to know more than we do, or to know it more surely, but only in our resolute efforts to improve things” (Miller, 1985, p. 13). Our knowledge base should be systematically criticized and corrected over time. Rather than waiting for problems to occur and potentially harm the profession or the people we serve, we should seek out the problems through a continuous evaluation of

The OT profession also should not fall prey to paradigms. We, as a profession, must not shift so far away from an idea that we no longer see the good in it, and we must not shift so far into an idea that we fail to be able to critique it. There is a recurring call to get back to the roots of the OT profession (Gillen, 2013). If we go back to the past, however, we must not forget what we have learned along the way. For example, if we only evaluate and treat a person’s ability to perform occupations following an acquired brain injury, we disassociate from what we have learned about the underlying neurological causes and processes of recovery. We must instead build on our body of knowledge through a careful and constant critique of our ideas. We must grow our knowledge to incorporate our new learning with our previous foundational steps. We should always function at our best guess and pursue new, better ideas using critical rationalism to elevate our practice to get to a better guess.

Crucial to critical rationalism are the qualities of imagination, resourcefulness, courage, determination, and willingness to learn (Popper, 1960). In the profession of OT, we need to develop a culture of critique. Within that culture must be an acknowledgement of what we have learned in the past, an openness to new ideas, and a continuous evaluation of our current body of knowledge. “Through integration and examination of occupational therapy’s past, present and future, our profession’s activities will show a constant flow of transformation and change” (Gilfoyle, 1984, p. 576).

those ideas.

Implications for OJOT

The mission of *The Open Journal of Occupational Therapy* (OJOT) is to help build the staircase of knowledge that leads the OT profession in the growth of knowledge to better ideas and better clinical solutions. *OJOT* is committed to providing open access to new ideas, and not just those ideas that fit with the latest bandwagon. Our aim is not to go back to our roots and shift away from all of the knowledge we have gained since the inception of OT, nor is it our aim to promote ideas

from an authoritarian perspective. We are open to submissions that provide criticism of the current paradigm of the profession and acknowledgement of the current problems in our knowledge base. We want to foster growth in the knowledge base of the OT profession without creating new bandwagons. Exploring new ideas and solutions is the way knowledge grows and criticism is the way it is controlled.

References

- Clark, F. A., Parham, D., Carlson, M. D., Frank, G., Jackson, J., Pierce, D., . . . Zemke, R. (1991). Occupational science: Academic innovation in the service of occupational therapy's future. *American Journal of Occupational Therapy*, 45, 300-310.
- Cooper, J. E. (2012). Reflections on the professionalization of occupational therapy: Time to put down the looking glass. *Canadian Journal of Occupational Therapy*, 79(4), 199-210. doi: 10.21827/cjot.2012.79.4.2
- Gillen, G. (2013, April). *A fork in the road: An occupational hazard?* [Eleanor Clarke Slagle lecture]. Symposium conducted at the meeting of the American Occupational Therapy Association Conference and Expo, San Diego, CA.
- Gilfoyle, E. M. (1984). Eleanor Clarke Slagle lectureship, 1984: Transformation of a profession. *American Journal of Occupational Therapy*, 38(9), 575-584.
- Hinojosa, J. (2013). The evidence-based paradox. *American Journal of Occupational Therapy*, 67(2), e18-e23. <http://dx.doi.org/10.5014/ajot.2013.005587>
- Holm, M. B. (2000). Our mandate for the new millennium: Evidence-based practice. *American Journal of Occupational Therapy*, 54(6), 575-585. <http://dx.doi.org/10.5014/ajot.54.6.575>
- Howard, B. S. (1991). How high do we jump? The effect of reimbursement on occupational therapy. *American Journal of Occupational Therapy*, 45(10), 875-881.
- Jongbloed, L., & Wendland, T. (2002). The impact of reimbursement systems on occupational therapy practice in Canada and the United States of America. *Canadian Journal of Occupational Therapy*, 69(3), 143-152. doi: 10.1177/000841740206900304
- Kielhofner, G. (1985). *A model of human occupation: Theory and application*. Baltimore: Williams and Wilkins.
- Kuhn, T. S. (1970). *The structure of scientific revolutions* (2nd ed.). Chicago: University of Chicago Press.
- Popper, K. (1960). The growth of scientific knowledge. In D. Miller (Ed.), *Popper selections* (pp. 171-180). Princeton: Princeton University Press.
- Miller, D. (1985). Editor's introduction. In D. Miller (Ed.), *Popper selections* (pp. 9-22). Princeton: Princeton University Press.
- Tickle-Degnen, L., & Bedell, G. (2003). Heterarchy and hierarchy: A critical appraisal of the "levels of evidence" as a tool for clinical decision making. *American Journal of*

Occupational Therapy, 57, 234-237.

Yerxa, E. J. (1987). Research: The key to the development of occupational therapy as an academic discipline. *American Journal of Occupational Therapy*, 41, 415-419.