Glen Gillen, EdD, OTR, FAOTA

Good evening and welcome! I am thrilled to be at this podium and just as thrilled to be resuming my life an hour from now! This honor has been overwhelming in a good way, as you can imagine and, also as you can imagine, stressful. I have to thank my colleagues at Columbia University for consistently reminding me over the past year that this is an honor, not a punishment. In all seriousness, however, I am particularly touched to be delivering this lecture in San Diego. The last time I was in this city was the day after I completed my mental health fieldwork about 5 miles from where we are now. That was about 25 years ago, and it was the final hurdle to completing my bachelor’s degree in occupational therapy at New York University. The occupational therapists who worked in the unit that I trained on that summer firmly embraced and applied Mary Reilly’s occupational behavior frame of reference. I feel lucky that I was thoroughly trained in her approach and had the chance to read her 1961 Slagle lecture (Reilly, 1962) multiple times that summer.

My Thesis

My thesis today is relatively straightforward. I (well, we, because it takes a village to put these lectures together) chose the title A Fork in the Road: An Occupational Hazard? for several reasons. As a relatively young profession, occupational therapy has made tremendous strides in its growth and will only continue to do so. However, there have been times on our professional journey when we have begun to lose sight of and confidence in our methods, including intervention and assessment approaches, which I will discuss. These proverbial “forks in the road” during our profession’s development may have led us away from our professed and philosophical occupational therapy methods.

Similarly, these forks in the road have resulted in hazards such as “professional blurring,” “dual encroachment,” and “professional envy,” which I will discuss. Finally—exciting, albeit frustrating—the incredible volume of research that has been conducted over the past decades has only served to solidify the validity and effectiveness of our professed and philosophical occupational therapy methods. Exciting? Yes—our profession’s philosophical base and methods are being supported by a variety of scientific methods. Frustrating? Yes—many of these methods are no longer called occupational therapy, and many occupational therapists do not seem to even be using them.
Framework: Voyage and Return

I am going to frame this lecture and my ideas around a classic story plot. Although literary scholars disagree on the final count, clearly only a finite number of story plots can be used to describe and summarize the books we read, movies we watch, television programs we watch, and stories we tell. Christopher Booker (2004), an English journalist and author, published the book *The Seven Basic Plots: Why We Tell Stories*. His text is a Jungian-influenced analysis of stories and their psychological meaning. His seven identified basic plots, with examples, include:

1. Overcoming the monster: *Jack and the Beanstalk*, *Frankenstein*, and *Jaws*
2. Rags to riches: *Cinderella* and *Aladdin*
3. The quest: *Don Quixote* and *Raiders of the Lost Ark*
4. Comedy: *The Marriage of Figaro* and Shakespeare’s comedies
5. Tragedy: *The Picture of Dorian Gray* and *King Lear*
6. Rebirth: *A Christmas Carol* and *It’s a Wonderful Life*
7. Voyage and return (the plot I focus on): *Gulliver’s Travels*, *Robinson Crusoe*, *Alice in Wonderland*, the *Wizard of Oz* and, in my opinion, our journey as an occupational therapy profession.

Examples of steps in the voyage-and-return plot include (Booker, 2004):

- **From normalcy to falling into the other world:** Normalcy is our usual, customary, traditional, normal functioning as a profession. I define *other worlds* as not just our attempts to be influenced by, but our adoption of and substitution of, other professions’ approaches and techniques. The obvious hazard is professional role blurring and loss of professional identity.

- **Fascination with puzzling and unfamiliar things:** Even in past Slagle lectures, we have called our own interventions “commonplace” (Reilly, 1962, p. 1) and “unsophisticated” (Hollis, 1979, p. 499). When I first began as a full-time academician, I was lamenting with a seasoned colleague about why our students are still reporting not seeing occupation practiced in the clinics. She responded by saying that occupation appears to not be sophisticated. She also added, “It’s not sexy!” If we feel that the tools of our trade are both commonplace and unsophisticated (and, I suppose, if we’re not feeling sexy), it makes sense that we would seek out seemingly more sophisticated techniques and approaches. However, it does not guarantee that these approaches are more effective or even in line with our profession’s philosophy. We begin to envy our colleagues in other professions, and further professional blurring continues.

- **Frustration:** Although I am only in the clinic 1 day a week, most of my day is about problem solving and celebrating the small successes one would expect to see on an acute neurology unit. However, there are everyday frustrations in clinics across the country that we all know as well. Why is this not working? How can I make clients better, and how can I do this faster? Why are they trying to do what I do? Why doesn’t everyone know my role here?

- **Thrilling escape and return to normalcy:** It might not be thrilling, but our return to normalcy is imperative. I am going to argue that to move forward, we may have to take a few steps back to get to where we want to be.

### Methods

I use two practice areas based on my expertise in neurorehabilitation to support my stance: (1) our evolved approaches to cognitive assessment and (2) our evolved approaches for people with performance limitations secondary to impaired motor control. These are just two examples. If these are not areas that are part of your practice, please reflect on your own areas of practice as I continue and think about common themes. I believe the voyage-and-return plot line can be applied to many areas of practice, such as working with hand injuries, working with mental health challenges, working in pediatrics, and so forth. I do want to be clear that this lecture is not about a specific area of practice; rather, I am using specific areas of practice to discuss our development as a profession. To document the plot of the story of our profession’s development in these areas, I have reviewed the *Archives of Occupational Therapy*, 1922–1924; *Occupational Therapy and Rehabilitation*, 1925–1951; the *American Journal of Occupational Therapy*, 1947–present; the Eleanor Clarke Slagle lectures, 1955–present; *Willard and Spackman’s Occupational Therapy*, Editions 1–11; and all editions of selected specialty textbooks, including *Occupational Therapy: Practice Skills for Physical Dysfunction* and *Occupational Therapy for Physical Dysfunction*. (And yes, the much discussed and touted balance of work, rest, and play has been a myth for me this year.)

### Our Normalcy

Because my research for this lecture goes back to the early 1900s, that is my starting point. What is our normalcy in the area of working with our clients with performance limitations secondary to impaired motor control? Our unique contribution to all areas of practice was quite clear at this early time. We were, and still should be, the leaders in the actual doing and the actual practice (Meyer, 1922).
Normalcy and Motor Control Interventions

The first documented case study in our journals that described occupational therapy interventions for motor control deficits after stroke was in Volume 1, Issue 1, of the Archives of Occupational Therapy in 1922. Occupational therapist Evelyn Lawrence Collins (1922) described being invited by Mrs. Slagle to do home care on the Lower East Side of Manhattan. She described her case as a woman bedridden after a "paralytic stroke" and the woman’s neighbor describing that “she can’t do nothing; she has only got one hand” (p. 36). Collins went on to give a short description of what we now mistakenly call a “contemporary” approach to motor control rehabilitation. Remember, this article was published in 1922. She described engaging the affected hand using a bilateral activity as the means to remediate hand function. The activity of creating three small purses had all the makings of what we have recently rediscovered and proven: Repetitive and purposeful activity has the powerful potential to remediate motor function.

As I continued to review our profession’s literature, I found that the occupational therapy approach to remediating motor control continued to be solidified and consistent across the life course. Occupational therapy interventions for this population were described as bilateral crafts (Collins, 1922); toy making for “uncomplicated paralysis” (Dean, 1922, p. 216); tool use, working looms, making rugs (Bowman, 1923); using a metronome during typing training (Spackman, 1947); engaging lower functioning clients in activity by unweighting the upper limb using a suspension sling (Covalt, Yamshon, & Nowicki, 1949; Spackman, 1947); project making (Suckle & Thompson, 1949); activities that provide graded resistance (Covalt et al., 1949); remedial games (Boeshart & Blau, 1951); an activity-based approach based on choosing selected activities (e.g., adapted games, filing, bilateral activities) determined by impairment level (Press, 1951); toy training (Robinault, 1953); bilateral activities such as sanding and wood working; and, again, using a suspension sling (Hopkins, 1963).

How then can we describe our normalcy? The words that we as an occupational therapy profession have historically used to describe this area of practice have one thing in common: They are primarily words of action. They include practicing, doing, active, activity, repetitive, life related, skill building, and relearning (Brunyate, 1947; Meyer, 1922; Spackman, 1947).

Fork in the Road

In reality, our normalcy and consistency in this area of practice lasted from about 1922 to the late 1950s or early 1960s, as noted earlier. So, just about 40 years. As the world changed dramatically around this time, our language and documented approaches took a dramatic turn as well—a proverbial fork in the road. Remember, we had been concerned that our approaches were commonplace, unsophisticated and, yes, not sexy. Booker (2004) described this point in the plot as having a fascination for unfamiliar things. We began to get, perhaps, overfocused on sets of techniques that may have looked more sophisticated and important than our normalcy. Instead of being just influenced by others’ approaches, we in fact took an adoption approach and, if you will, a replacement approach. To illustrate, take a look at how our approach to remediating motor control impairments across the life course changed from the third to the fourth edition of Willard and Spackman’s (1963, 1971) Occupational Therapy (Table 1).

As the left column of the table clearly indicates, we were still clearly focused on being the profession that engaged clients in the actual doing and the actual practice. Action words and everyday living were highlighted. Our approach was clear; we were remediating motor control in the context of using everyday activities (Hopkins, 1963). After that, our language and description of occupational therapy abruptly and dramatically changed (Huss, 1971), as indicated in the right column.

In fact, the third edition of Willard and Spackman’s (1963) Occupational Therapy was a transitional volume and confusing at times. This edition was consistent with our sense of normalcy with the exception of an added last and new chapter on neuromuscular integration. This chapter was described as a framework derived from the biological sciences, neurology, physiology, phylogeny, and ontogeny as it related to occupational therapy. It was the initial description in our textbooks of sets of techniques to be applied to our clients and—with one exception, Margaret Rood—exclusively approaches that did not stem from

Table 1. Changing Descriptions of Occupational Therapy for Clients With Impaired Motor Control Across the Life Course

<table>
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<tbody>
<tr>
<td>Cut meat</td>
<td>Ice</td>
</tr>
<tr>
<td>Wash and dry dishes</td>
<td>Tap</td>
</tr>
<tr>
<td>Open and hold an umbrella</td>
<td>Rub</td>
</tr>
<tr>
<td>Carry a tray of dishes</td>
<td>Brush</td>
</tr>
<tr>
<td>Finger paint</td>
<td>Stretch</td>
</tr>
<tr>
<td>Feed and wash with the affected extremity</td>
<td>Pattern</td>
</tr>
<tr>
<td>Suspend or unweight the arm during activity</td>
<td>Compress</td>
</tr>
<tr>
<td>Use of rolling pin</td>
<td>Wrap</td>
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<tr>
<td>Use of carpet sweeper</td>
<td>Inhibit</td>
</tr>
<tr>
<td>Etc.</td>
<td>Facilitate</td>
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occupational therapy. To summarize and to be a bit facetious, we transitioned from having our clients brush their hair and teeth so that they might relearn motor control and maximize participation to having us, the therapists, brush over muscle–tendon units so that we could facilitate a muscle contraction. We abruptly switched from our patients actively doing (third edition; Willard & Spackman, 1963) to our patients being somewhat passive recipients of our services (fourth edition; Willard & Spackman, 1971).

Our normalcy in this area has been lost over the years. Even in our own textbooks we incorrectly refer to our traditional approaches as total approaches developed by other disciplines such as neurosurgery, physiatry, physical therapy, psychiatry, neurophysiology, and so forth. This was not our tradition. It was never our normalcy. In our current language (American Occupational Therapy Association [AOTA], 2008), these techniques and total approaches would be categorized as preparatory, which relegates activity and occupation to an afterthought.

Following this path led to a dramatic shift away from our core values and occupational therapy principles. We clearly moved away from the actual doing and the actual practice as described by Adolf Meyer in 1922 to a culture in which our primary role was to “do to” our clients. At the same time Mary Reilly (1962) was delivering the most often-quoted sentence in any Slagle lecture to date, which, as you know, contains the key phrase “man through the use of his hands” (p. 1), we started to take the stance that the therapist’s hands are the key to recovery. To make a point, I do not want to be taken the wrong way with regard to the use of our hands. My clinical appointment is in acute neurology, and I am clear on the importance of well-honed hands-on skills for the purposes of safety, task completion, comfort, and reassurance.

**Frustration**

In the voyage-and-return plot, the next plot point is frustration (Booker, 2004). Did we choose the correct fork? At this point in our profession’s journey, our reliance on the techniques and approaches of our colleagues from other professions has outlasted our own occupational therapy approach by at least a decade—50 years compared with our 40 years of normalcy. The currency and efficacy of these techniques and approaches we have dubbed “traditional” has been called into question for at least 2 decades by scholars and scientists from our field and others, and this questioning continues (Butler & Darrah, 2001; Damiano, 2007; Horak, 1991; Kollen et al., 2009; Mathiowetz & Haugen, 1994).

Confusion over our role may persist when professional blurring, professional envy, and dual-sided encroachment occur. Here is an example of this professional blurring or, perhaps, professional envy. Although the following two studies (like all studies) have limitations, and their methods may vary, the message is, I believe, a powerful one and, yes, a frustrating one. Smallfield and Karges (2009) aimed to classify occupational therapy intervention for stroke survivors on an inpatient rehabilitation unit. They discovered that more sessions were spent on prefunctional activities rather than on functional activities. In fact, almost 66% of sessions were not related to function. They further stated that “occupational therapists use prefunctional activities that aim to improve performance skills and body structures more often than occupation-based activities that incorporate meaningful activities into therapy sessions” (p. 412). How can that be?

In contrast, our colleagues in physical therapy performed a similar study to describe physical therapy interventions for people with stroke undergoing inpatient rehabilitation (Jette et al., 2005). They documented that fewer than 20% of interventions were classified as prefunctional and more than half would be classified as interventions related to areas of occupation using the language in our current practice framework (AOTA, 2008). Granted, most were in the focused category of functional mobility. I hope you can see my concern and point regardless.

In his 1996 Slagle lecture, David Nelson (1997) spoke of his concern that people from other professions are coming late to the table and claiming credit for some of the great ideas of occupational therapy. I agree wholeheartedly. Although I was never a popular kid, I am very proud to be part of a profession that seems to have won the “most-popular” contest. Have you looked around and listened for the past decade? It seems as though so many of our colleagues in other disciplines want to be us. Their current chosen methods (both in practice and in writing) are quickly morphing into our traditional occupational therapy. We know that imitation is the sincerest form of flattery—okay, I am flattered, but more so, frustrated.

It is hard, however, to stand our ground and defend our own practice when the same argument may be made against us. We cannot defend our scope of practice if we do not practice what and how we preach. How can we challenge our colleagues’ use of our modalities if in many cases we are not being seen using them ourselves (reflect back on the findings of Smallfield & Karges, 2009) and if we freely use theirs? I would identify this problem as a dual encroachment related to scope of practice.
In her 2000 Slagle lecture, Margo Holm charged us with a mandate for the new millennium: evidence-based practice, which is consistent with our Centennial Vision (AOTA, 2007). Wow! We have a ton of data to sort through. I mean this in a good way. The past decade has resulted in an explosion of research to help us guide our practice. My colleagues and I just completed a project for AOTA focused on defining effective interventions to improve occupational performance for people with motor deficits after stroke. We reviewed almost 5,000 abstracts, and multiple papers met our strict inclusion criteria. This review was limited to the past several years and included literature both from occupational therapy and from our colleagues in other disciplines as long as a change in occupational performance was noted. For the first time in my career as an occupational therapist, I was overwhelmed by the sheer amount of evidence that was generated. On the basis of this current evidence-based review, if I was going to summarize which interventions are effective in improving occupational performance, I would describe them as practicing, doing, active, activity, repetitive, life related, skill building, and relearning.

Yes, these words should look familiar; earlier, I described that our profession’s professed philosophy and approach is being further validated from a science perspective. This validation is to be celebrated! It is what we had previously been doing for years.

Further descriptions of these approaches include task-oriented approach, task-specific training, repetitive task practice, task-related training, massed practice, high intensity, active, and real-world focused. Occupational therapy is truly an art and science. However—again, frustratingly—these approaches are not being called occupational therapy.

I show some parallels in Figure 1. On the left side are descriptions of specific tasks that come from our own early literature as described earlier, including early editions of our journals and early editions of Willard and Spackman’s Principles of Occupational Therapy, as discussed earlier. On the right side are examples of tasks used in both adult and pediatric rigorous evidence-based protocols that have documented improved occupational performance using a variety of methods: quantitative, qualitative, self-report, significant-other report, and so forth (Gordon, Schneider, Chinnan, & Charles, 2007; Taub et al., 1994). These parallels are not difficult to find if you go back far enough in our literature, but they are pretty far back at this point.

Furthermore, and a further reason to celebrate, many of the techniques and principles we developed and documented as a profession decades ago are now considered cutting edge and, my favorite misnomer, “contemporary.” In the first edition of Principles of Occupational Therapy, Brunyate (1947) discussed treating a child with cerebral palsy, stating that “the child can practice picking up the

<table>
<thead>
<tr>
<th>Our Occupational Therapy Normalcy</th>
<th>Current Evidence</th>
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<tbody>
<tr>
<td>Feed/cut meat</td>
<td>Eating</td>
</tr>
<tr>
<td>Wash body</td>
<td>ADLs</td>
</tr>
<tr>
<td>Wash/dry dishes</td>
<td>Push a broom</td>
</tr>
<tr>
<td>Use of carpet sweeper</td>
<td>Keyboard</td>
</tr>
<tr>
<td>Typing</td>
<td>Card games/dominoes</td>
</tr>
<tr>
<td>Remedial games</td>
<td>Video games/toys</td>
</tr>
<tr>
<td>Finger paint</td>
<td>Cutting paper/drawing</td>
</tr>
<tr>
<td>Bilateral crafts</td>
<td>Arts and crafts</td>
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Figure 1. Comparison of occupational therapy’s normalcy and current evidence-based practice.

Note. ADLs = activities of daily living.
glass a number of times” (p. 284) and reminding us that “repetitive use will gradually teach control” (p. 276). This concept is one of the most basic motor learning principles used to guide practice today. We now use the seemingly more sophisticated terms of blocked practice and repetitive task practice (Schmidt & Lee, 2011). Clare Spackman (1954) also reminded us that “relearning the desired skills requires practice all day long everyday” (p. 214). Suggested time? Sixteen hours per day! We now called this massed practice, which is a foundation of constraint-induced movement therapy, without doubt effective for a subset of our clients.

Over the years, some of the “traditional” approaches used have shied away from resistive activities. We were early proponents of using resistive activities (Brunyate, 1947; Covalt et al., 1949), consistent with current understanding that weakness after acquired brain injury is a crucial factor to consider to improve occupational performance (Ada, Dorsch, & Canning, 2006).

We have been unweighting severely hemiparetic limbs to promote early use and motor control for decades (Covalt et al., 1949; Spackman, 1947). We did this using deltoid aids and inexpensive counterbalance slings (Urquhart, 1975). Now, seemingly more sophisticated versions of unweighting limbs using expensive robotics are considered contemporary and cutting edge.

On the basis of current research, the efficacy of occupational therapy in motor recovery is based on a triad: early intervention, task-oriented training, and repetition of therapies. New and emerging research continues to demonstrate that the use of this triad, which highlights repetitive practice of real-world activities (our normalcy), not only has the potential to improve motor function and occupational performance, it also has the powerful potential to remodel and reorganize people’s brains. Task-specific training sessions spent “simply” playing games, performing simulated office work, doing housekeeping chores, practicing walking, or practicing how to open and close a door or drawer (our normalcy) has resulted in use-dependent cortical changes. This involvement in everyday activities

- Increases gray matter in sensory and motor areas both ipsilateral and contralateral to the affected limb and to the bilateral hippocampi,
- Strengthens motor cortical areas and associated descending cortical connections,
- Increases contralesional and ipsilesional cortical activation on functional MRI, and
- Increases areas of activation to the cerebellum and mid-brain (Young & Tolentino, 2011).

As a clinician, this is the icing on the cake; as a researcher and someone who wants occupational therapy to achieve its Centennial Vision (AOTA, 2007)—that is, to be a “powerful, widely recognized, science-driven, and evidence-based profession” (p. 613)—I find it fascinating, exciting and, if I may, sexy as well! Let’s never again call our techniques unsophisticated.

Just to review our journey related to motor control, our early involvement related to motor control training was clear from the inception of the profession. It was only around the 1960s when our professed methods took a dramatic shift in favor of our colleagues’ methods (see Figure 2). I will talk about moving forward soon.

Cognitive Rehabilitation and Assessment: Our Normalcy?

I want to switch gears and use another area of practice as an example to describe our voyage before summarizing. Our involvement in the arena of cognitive rehabilitation, which is better described for our purposes as improving occupational performance for those with cognitive deficits, is not as clear. I use cognitive assessment as my specific example. Our involvement in this practice area definitely came later than working with people with performance deficits secondary to motor impairments. You can argue that it is a newer field, and I agree; however, the earliest attempts at rehabilitating people with cognitive deficits date back to the First World War (Boake, 1989). In our professional journals, the first papers concerning cognition did not appear until the mid-1960s. Our first official statement on cognition and occupational therapy was approved in 1991 (AOTA, 1991). Not until the fourth edition of Willard and Spackman’s Occupational Therapy (Gilfoyle & Grady, 1971) was cognition addressed. This volume contained the first list of instruments recommended for use by occupational therapists for clients with a variety of diagnoses that result in cognitive–perceptual–motor dysfunction or delays. Included on this list (with

Figure 2. Timeline related to our involvement in motor control training and cognitive assessment. The top timeline represents occupational therapy’s involvement in the area of motor control. The bottom timeline represents occupational therapy’s involvement in the area of cognitive assessment.
the one exception of A. Jean Ayres, who delivered the Slagle lecture in 1963) were assessments developed exclusively by our colleagues in other disciplines (educational psychology, psychology, neuropsychology, etc.). These tools, even at face value, had limited resemblance to what was the normalcy of original and authentic occupational therapy—another proverbial fork in the road and, using Booker’s (2004) plot points, an early fascination with unfamiliar things.

It may be interesting to note that our shift in motor control approaches was happening at the same time as our adoption of others’ cognitive assessment approaches. The time line on top in Figure 2 represents our journey related to motor control. The time line on the bottom represents our journey related to our involvement in cognitive rehabilitation. Note the lack of early history and the early adoption of our colleagues’ approaches. Indeed, these times were turbulent, and science was advancing at a startling rate. We were unsure of our seemingly unsophisticated methods and adopted what appeared to be a more advanced and sophisticated approach.

Our literature continued to support the almost exclusive use of the assessment approaches of our colleagues in other disciplines. This support continued through multiple editions of Willard and Spackman’s Occupational Therapy and continued to be solidified when the first several editions of our specialty texts were published and the same or similar tools were recommended. What continued to solidify what I will call an adopted approach to cognitive assessment was further blurred when many of our colleagues in our profession began to develop instruments that exclusively included test items similar to those on instruments developed by our colleagues in other disciplines.

Our normalcy related to cognitive assessment can be described using the following descriptors: originally and primarily adopted from other disciplines, not occupation based, contrived, novel, two dimensional in a three-dimensional world, tested in an 8.5- × 11-inch space, and pen and paper or table top based. There are many concerns related to the exclusive use of this level of measurement when our focus is on occupational performance. Our client’s lives and occupations are quite complicated. Engagement in occupation requires the ability to use multiple cognitive processes, motor skills, and language skills simultaneously. In addition, on top of all that, we need to regulate our emotions. Life and occupation are not about a simplistic cognitive manipulation.

Concerns Regarding Our Normalcy

One major concern is that this style of measurement does not take into account the well-documented dual-task paradigm. A dual-task paradigm is a procedure in research that requires a person to perform two tasks simultaneously to compare performance with single-task conditions. If Task 1 is stepping over obstacles and Task 2 is memorizing a grocery list, one may have a relatively high level of performance when performing the tasks in isolation. When one is then asked to step over obstacles while memorizing, one of three performance changes will most likely be noted: degraded performance in Task 1, in Task 2, or in both tasks.

To fully experience the dual-task paradigm, simply think about all the times you were rushing to work and got behind somebody who was walking and texting. Think about that person’s walking speed. The research is clear. Dual-task measures are more accurate at discriminating cognitive impairment than traditional (single) measures (Holtzer, Burright, & Donovick, 2004). The dual-task research is very controlled to ensure that one is doing only two tasks at once. Again, this is still not everyday life. Life is not controlled. It does not take place in a quiet, well-lit room that is free of distractions. It requires not only dual tasking but multitasking, many times with external time pressures that must also be managed. Even tasks such as dressing that appear so simplistic or, as we have called them, unsophisticated rely on a dynamic interplay of multiple neural networks and cognitive–perceptual processes to be successful (Árnadóttir, 2011). There is nothing simple about it.

The next concern is novelty. I have reviewed survey research to document the cognitive assessments most commonly used by occupational therapists and reviewed the items included to evaluate cognition (Koh, Hoffman, Bennett, & McKenna, 2009; Korner-Bitensky, Barrett-Bernstein, Bibas, & Poulin, 2011; Menon-Nair, Korner-Bitensky, & Ogourtsova, 2007). Item examples include block designs, design drawing or copying, draw a man, butterfly puzzles, gesture copying, pegboard designs, cancellation tasks, memorizing a number string, and making trails. Although novelty testing may be important for our high-level clients with executive dysfunction, it puts many of our clients at a disadvantage. We know this from our own lives and because this paradigm has been in the literature for more than a decade. Performance of novel tasks requires increased attentional control, compromises secondary task performance (i.e., memory), renders one unable to use proceduralized control or “autopilot,” and decreases overall task performance (Beilock, Wierenga, & Carr, 2002).

Finally, in terms of concerns, the concept of ecological validity or variants thereof can be found in the psychology literature dating back to 1943 (Schmuckler, 2001). Ecological validity typically refers to whether one can generalize from observed behavior in testing to natural behavior.
in the world. I have a more pragmatic definition: So what? What does it really mean if one cannot count backward from 100 by 7s or draw two intersecting pentagons? What does that tell us about occupational performance?

At least two conditions determine whether a tool is ecologically valid (Chaytor & Schmitter-Edgecombe, 2003):
1. Verisimilitude, the degree to which the cognitive demands of the test theoretically resemble the cognitive demands in the everyday environment (“functional cognition”); identifies difficulty in performing real-world tasks
2. Veridicality, the degree to which existing tests are empirically related to measures of everyday functioning (requires a statistical analysis).

To satisfy the first condition, that is, that the demands of the assessment theoretically resemble everyday demands, we need to move away from block designs, design drawing and copying, draw a man, butterfly puzzles, gesture copying, pegboard designs, cancellation tasks, memorizing a number string, making trails, and so forth and back to what makes us unique—that is, performance-based cognitive assessments using real-world tasks in the correct environmental context. Satisfying the second condition of ecological validity, that is, a statistical relationship with measures of everyday function, will most likely not occur if we continue on our current path. For more than 30 years, scholars and researchers have been concerned about the clear lack of a relationship between this level of cognitive measurement and daily functioning (Bouwens et al., 2008; Burgess et al., 2006; Heaton & Pendleton, 1981), thus highlighting the need for direct observation (both standardized and nonstandardized) of everyday activities: our true normalcy.

True Normalcy

In addition to 30 years of documenting this weak relationship between cognitive testing and real-world functioning, there has been a 30-year dialogue by our colleagues in other professions about what to do about it. Here again is why we should celebrate. We, the profession of occupational therapy, developed some of the first cognitive assessments that used occupation and occupational analysis to document how cognition supported or limited participation in everyday occupations. No more guessing. We should continue to be the leaders in the area of occupation and performance-based assessment. In the area of mental health, 37 years ago Sara Brayman and colleagues developed and published the Comprehensive Occupational Therapy Evaluation (Brayman, Kirby, Misenheimer, & Short, 1976). Many of the behaviors included on this scale were identified by A. Jean Ayres 60 years ago. Almost 30 years ago, Claudia Allen, who delivered the Slagle lecture in 1987, developed the first version of the Routine Task Inventory (Allen, 1985).

The first occupation-based cognitive assessment in the area of neurorehabilitation was developed by an Icelandic master’s-degree student at the University of Southern California in 1985.

Gudrun Árnadóttir was way ahead of her time and almost 30 years ago tried to get us neurotherapists to return to our roots of occupation in this area of practice with the Árnadóttir OT–ADL Neurobehavioral Evaluation, now known as the ADL-focused Occupation-based Neurobehavioral Evaluation (A–ONE; Árnadóttir, 1990, 2011). Soon after that Carolyn Baum, who delivered the Slagle lecture in 1980, and her colleagues developed and published the Kitchen Task Assessment (Baum & Edwards, 1993), which continued to evolve into the Executive Function Performance Test (Baum et al., 2008). In the same time frame, Anne Fisher, who delivered the Slagle lecture in 1998, developed and published the Assessment of Motor and Process Skills (AMPS; Fisher, 1992; Fisher & Jones, 2011) and subsequently the School AMPS (Atchison, Fisher, & Bryze, 1998; Fisher, Bryze, & Atchison, 2000), both measures of occupational performance and performance skills and the gold standard in terms of the sophistication of its psychometric properties (Fisher, 1993).

Frustration

So, we have an almost 40-year history of solving the problem of identified limitations in typical cognitive assessment by creating occupation-based assessments. These tools are completely appropriate to use with our clients throughout the life course who are living with performance deficits secondary to cognitive deficits. However, the next question is, Are we using them in practice? In too many instances, the answer appears to be “no” on the basis of published survey research (Koh et al., 2009; Korner-Bitensky et al., 2011; Menon-Nair et al., 2007) and, I will add, experience. Again, our journey related to this area of practice is colored by an early adoption of the approach to assessment used by our colleagues in other disciplines. Because of this, our journey is also colored by professional blurring and again dual encroachment. I want to read a couple of quotes to you:

• “Predictions based on neuropsychological test data tend to be more accurate if the particular tasks utilized during testing closely match or simulate the individual’s everyday and vocational demands” (Sbordone, 2001, p. 199).
• “The ecological validity of neuropsychological testing can be extended by observing the patient’s approach to
tasks in the assessment environment and by observing the patient in his or her normal activities” (Bennett, 2001, p. 237).

- “The importance of reliable behavioural observations, made in more ecologically valid environments than purely the consulting room is stressed” (Manchester, Priestley, & Jackson, 2004, p. 1067).

None of these quotes are from occupational therapists. They are quotes in the literature from our colleagues in other disciplines. Again, imitation is the sincerest form of flattery. However, I guess our colleagues can say the same about us. Again, I hope you see my concern.

Our colleagues in other disciplines are now developing assessments that use items that clearly represent the authentic use of occupation in an attempt to be a more valid and accurate measure of everyday cognition. Simultaneously, we continue to use (and develop) assessments that can best be described as novel, contrived, and having little to do with occupation and everyday life (Koh et al., 2009; Korner-Bitensky et al., 2011; Menon-Nair et al., 2007).

Here is the current reality. We have already designed, developed, and aggressively tested the psychometric properties of our performance-based cognitive assessments and performance-based assessments in general. We do not need to scramble to create them. We simply need to adopt our own tools and return to our own philosophy, our normalcy. We need to celebrate our decades of work as a profession. Although I referred to some of these tools earlier, there are too many to name in one article. Most are readily available and just awaiting adoption. These tools cover the life course and highlight our unique contribution to this interprofessional area of practice.

Return to Normalcy

The last point in Booker’s (2004) voyage-and-return plot is return to normalcy. This return is imperative. I have used the fork in the road to describe our professional journey. As stated earlier, in my opinion it is pretty clear we need to journey back to move forward. We need to reclaim what we do and realize that nobody does occupation better than we do.

How do we hasten this return back to our normalcy? At the return plot point in Booker’s (2004) text, he challenged us to consider this quote: “At this point the real question posed by the whole adventure is: How far have they learned or gained from their experience? Have they been fundamentally changed?” (p. 106).

I argue that we have been changed because of our professional journey. We have changed for the better and have already begun the journey back to our philosophical roots. I envision a time in our immediate future when practitioners not only respect but use the sophisticated and effective tools of our trade.

Many of the heroes and heroines in voyage-and-return plots return for the better and have been changed for the good. Descriptors in these plots include returning wiser, more developed, and evolved; having a deeper understanding; having expanded knowledge and awareness; returning back to the familiar (our normalcy); returning as a better person (I will add practitioner, educator, and researcher); having learned something from the journey; and, most important, having a clear future.

How do we hasten our return? Again, time is of the essence. The good news is this should not be difficult. We have already done the work. We must now simply embrace it. Some considerations are as follows:

- How much time is spent on impairment-level and preparatory interventions that are not occupation based? Practitioners, I challenge you to consider your practice in terms of the actual percentage of time spent in occupation. I encourage you to reflect on this and, with your peers, implement a plan to consistently increase this percentage over the next months. By the way, I have no problem with preparatory activities. I do have a concern over how they may be being overused.
- A related issue is whether we are using authentic occupations in the clinic or catalog-purchased contrived activities. Practitioners, this change needs to occur now. I will tell you this is not only doable, it is also less expensive! We have generated a body of research emphasizing the use of real, familiar, and age-appropriate objects and occupations.
- We need to move away from “therapists doing to” and back to a model of “clients doing”—back to the actual practice and the actual doing we discussed in 1922 and that, again, are now being called cutting edge and contemporary. Everything old is new again.
- Do we look like occupational therapists? If we visited each other’s clinics, how often would we see authentic occupations being used? We need to practice what we preach. If we do not, we are on unsteady ground to protect what we do. At the same time, we need to stop encroaching on our colleagues’ approaches and methods.
- There is nothing wrong with being influenced by our colleagues in other professions. However, let us learn from our mistakes and, going forward, maintain our confidence that our approach is effective, artistic, scientific, reimbursable, and evidence based. Let us not repeat our mistakes of replacing our approach by adopting others’ techniques.
• Let’s stop trying to convince ourselves and our colleagues that we can predict occupational performance from non-occupation-based assessments.

• In terms of assessment, the time to embrace performance-based assessments is today, if not yesterday. As stated, these tools are already developed and available. Some argue that we do not have time to use them. I would argue back not only that they are time savers but that we do not have time not to use them to maintain our professional identity.

• How much information should we include in entry-level texts and programs related to potentially outdated approaches to assessment and intervention that are not historically ours and have not shown the ability to predict or improve occupational performance? How much curriculum time and testing should we spend on this material?

To be a science-driven and evidence-based profession that is globally connected (AOTA, 2007) and, may I add, reimbursable, we need to move away from having our clients spell the word word backward and move back to engagement in real-world tasks.

In summary, we are at a critical point in our voyage and development. As never before, our philosophical approach, the art and science that is occupational therapy, and our normalcy are clearly being supported by our scientific methods. Again, we need to celebrate it! But, more important, we need to embrace it and integrate it. Let’s all promise to go back to work as change agents embracing our roots, celebrating the amazing work and the accomplishments of our young profession. Let’s get excited to go back to our clinics, our classrooms, and our laboratories and put the occupation back in occupational therapy. ▲

References


Smallfield, S., & Karges, J. (2009). Classification of occupational therapy intervention for inpatient stroke rehabilita-


