Occupation by Design: Dimensions, Therapeutic Power, and Creative Process

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Within occupational therapy, there is explosive growth in our understanding of occupation, the field’s primary modality (American Occupational Therapy Association [AOTA], 1995; Clark et al., 1991; Kielhofner, 1992; Nelson, 1997; Primeau, 1996; Schkade & Schultz, 1992; Yerxa et al., 1989; Zemke & Clark, 1996). Simultaneously, the health care system is increasingly valuing functional, or occupational, outcomes. A potential time of congruence is approaching if occupational therapy can expeditiously translate an expanding knowledge of occupation into powerful occupation-based practice.

Occupational therapy is already responding to the stronger emphasis on functional outcomes in health care by moving away from medical model, component-based practice and toward more whole, top–down, occupation-based practice (Coster, 1998; Law, 1998). Other professions are also responding. They honor the validity of occupation in the most flattering and dangerous ways by imitating our focus and claiming it as their own area of expertise (Wood, 1998). In the face of aggressive competition for our traditional areas of practice, the key to our success is simple: just be the best at what we do. We must use occupation in the most powerful therapeutic ways possible. We must consistently target functional occupational patterns as outcomes. And, we must be eloquent about our unique clinical perspective.

When occupational science first made its promise to occupational therapy that basic research into typical occu-
pations would enhance therapeutic efficacy (Clark et al., 1991; Yerxa et al., 1989), some doubted (Mosey, 1992). How would a scattershot of various studies into occupation effectively move the field forward? In critical need of research on clinical issues, could we afford investment of time and energy in basic research? These are good, tough questions. The usefulness to occupational therapy of basic research into occupation could be relatively limited if it is not complemented by specific strategies to bring this knowledge into practice.

To bring the full potential of occupation to bear in the lives of clients requires three critical bridges: a generative discourse regarding occupation-based practice, demonstration sites, and effective education. Building such bridges requires new conceptual tools. The occupational design approach described here offers the following concepts to support the translation of basic knowledge of occupation into practice applications: the subjective and contextual dimensions of occupational experience, occupational design process, and three sources of therapeutic power in occupation-based interventions. Before exploring these new concepts, let us look more closely at the three bridges, or the three creative loci in the life of the profession where knowledge of occupation can be most forcefully and rapidly applied to enhance the power of practice (see Figure 1).

Three Bridges to Build: Translating Knowledge of Occupation Into Powerful Occupation-Based Practice

Bridge: A Generative Discourse on the Use of Occupation in Practice

The first bridge needed is an active discourse regarding the relation between theories and research describing typical occupations and their application in practice. This discussion must go on in public and private ways, from scholarly publications to the mind of the therapist during intervention. The discourse must be highly productive of useful new concepts. That is, we must be able to talk the talk of how occupation is used in practice frequently, fluently, and in a way that spurs a rapid evolution of innovative practice thinking.

We require language for articulating how the translation from knowledge to practice occurs. The most obvious explanation of how we use knowledge of occupation in practice is that by understanding occupation more fully, therapists are better prepared to use and interpret it in working with clients. The meaning of this statement, however, is not particularly transparent. Similarly, reasoning from a depth of background in how humans experience occupation is not a simple form of clinical thinking. Basing day-to-day practice on the study of occupation as it occurs in typical and atypical conditions is a demanding, theoretical, action-oriented, and fluid style of intervention. It is difficult to describe.

Generative discourse has already begun to produce an occupation-based practice language. For example, one clarifying concept that has emerged is the distinction between the use of occupation as the means of intervention versus the end of intervention (Cynkin, 1995; Gray, 1998; Trombly, 1995). Current research on functional outcomes and the development of top–down assessments will also provide new language to practice (Coster, 1998). Drawing heavily from anthropology is a fruitful strategy for importing humanistic theories to describe human experience, as is demonstrated by clinical reasoning and narrative research (Clark, 1993; Clark, Carlson, & Polkinghorne, 1997; Mattingly & Fleming, 1994). As this generative discourse about the use of knowledge of occupation in practice grows, occupational therapy will find the more technical, static structures of frames of reference a poor fit. The language of occupation-based practice will be more dynamic and reflective. A flourishing, generative discourse on the use of occupation in practice is an essential bridge for putting our knowledge of occupation to work, ultimately to enhance the efficacy of intervention.

Bridge: Practice Demonstration Sites

The field requires a thousand bridges in the form of practice demonstration sites that explore, create, model, and disseminate how it is that knowledge of occupation can be effectively brought to bear in different types of practice. This is where occupational therapy must walk the walk of occupation in practice.

Demonstration sites that are productive of new concepts regarding occupation-based practice will be marked by four indicators. They will depend on insightful clinical reasoning based in the study of occupation. Powerful intervention will be provided through custom-designed, naturalistic occupational experiences. Collaborative identification of desired, functional occupational patterns will provide the goals of intervention. And, lastly, these sites will be successful in communicating within the system of health care and establishing a sufficient referral and reimbursement base.

These programs already exist (Clark et al., 1997; Jackson, Carlson, Mandel, Zemke, & Clark, 1998). It is critically important that the field benefit from the accumu-
lating expertise at such exemplary sites through publication of their successes. Descriptions of these programs are important to our shared sense of the potential variety and number of powerful, occupation-based, life-enhancing programs possible. In these changing and competitive times in health care, the bridge of successful practice demonstration sites is critical to the profession’s survival.

Bridge: Educating Sophisticated Practitioners To Use Knowledge of Occupation in Practice

The field requires educational programs that have been specifically constructed with a focus on teaching effective occupation-based practice (Yerxa, 1998). Presently, students enter the field with cultural values that give higher status to technical, medical knowledge than to the highly theoretical yet commonsense knowledge of how what we do shapes who we are. If uninfluenced, these values produce graduates who respect the knowledge base of other professions more than they do their own. Students require much more rigorous education regarding occupation. The profession can no longer afford to give lip service to occupation in the curriculum while handing over the largest portion of the student’s study time to component-focused and physiological knowledge.

Reprioritizing and shifting the balance of curriculum content so that students will emerge with the necessary skills for effectively applying an understanding of occupation in practice will deeply challenge occupational therapy education. Hard decisions will be required: less anatomy and more ethnography of disability? less infant reflexes and more family theory? For some educators, these are shocking ideas. But the curriculum is not indefinitely expandable. Too often, students enter the field feeling overwhelmed by their fragmented understanding of many different knowledge bases. It is the responsibility of educators, not students, to resolve the tough issues in our knowledge base in order to offer centrally integrating concepts.

To accomplish such a rapid refocusing of mission in our educational programs will require several efforts from educators: clear recognition that teaching specific intervention techniques will not provide a lasting education in today’s fast-changing health care environment; faculty development around knowledge of occupation in practice; commitment to preparing students with insight into occupational experience and its use in intervention; and reconfiguration of curricular structures. In this process, education will draw on the conceptual language springing from the generative discourse on occupation-based practice as well as from conceptual discoveries at demonstration sites. Students prepared in this way will be innovative, entrepreneurial, and drawn to sites at which exemplary practice is taking place.

The graduate who brings a deep preparation in occupation’s use in practice will be able to not only walk the walk of occupation-based intervention, but also talk the talk. That is, graduates will be able to explain why their occupation-based interventions are effectively designed for a specific person with a specific goal. Such a sophisticated graduate will be ready to adapt interventions to a variety of persons, disabilities, and settings. She or he will use the language of occupation’s therapeutic power in a way that is compelling, understandable to others, and anchored in everyday experience. Not only will graduates prepared in an occupation-focused curriculum use more powerful interventions, but they also will be more eloquent about why such an approach is effective.

Bridge-Building Tools: Dimensions of Occupation, Sources of Therapeutic Power, and Occupational Design Process

As stated, in order to thrive the profession requires three bridges to move knowledge of occupation into powerful applications in practice: a generative discourse, demonstration practice sites, and education that focuses on occupation-based intervention to produce sophisticated practitioners. In this effort, the following conceptual tools should prove useful: an understanding of the dimensions of occupational experience, language articulating the sources of therapeutic power in occupation-based interventions, and a process for design of therapeutic occupations.

Dimensions of Occupation: Sources of Therapeutic Power

To use occupation most effectively in practice, the therapist must understand its dimensions sufficiently to be able to conceptualize their occurring effects as they unfold during therapy. Here, I offer six primary dimensions of occupation (three subjective, three contextual) and the occupational design process. I will describe how these concepts translate into three primary sources of therapeutic power in occupation-based interventions (Pierce, 1997a, 1998, in press; Zemke & Pierce, 1994) (see Figure 2).

The important point here is not that these are the definitive dimensions of occupation or the final statement regarding the sources of its therapeutic power in practice. Other categories could have been constructed to describe occupation and its application, although many of the same concepts would surely have been included. The value of the occupational design approach presented here is that it broadly describes both the complex whole of a person’s occupational experience and the elements of the therapeutic process in order to provide the therapist with conceptual sources of therapeutic power upon which she or he can easily reflect before, during, and after intervention.

Appeal: Designing With Productivity, Pleasure, and Restoration

Appeal is the degree to which the client finds the therapeutic occupation desirable in terms of the levels of productiv-
ity, pleasure, and restoration he or she experiences (Pierce, 1997a, 1998). Designing intervention that has high appeal requires a knowledge base in how humans typically experience occupations along these subjective dimensions. This depth of knowledge must be matched by the therapist’s skills for creating an informed perspective on the uniqueness of each client, especially through observation and interview. Interventions that blend pleasure, productivity, and restoration in a careful mix that is most likely to be appealing to that person at that time can then be created collaboratively.

Beyond work, play, and self-care. Since the beginning of the profession, occupational therapists have thought of occupation within familiar categories provided by our western cultural history, such as work, play, leisure, and self-care. These commonsense categories (Geertz, 1983) carry great wisdom, tapping essential differences in human activity. As occupational scientists have begun to examine these categories more closely, however, they appear to be simplistic, value laden, decontextualized, and insufficiently descriptive of subjective experience (Pierce, 1997b; Primeau, 1996). There is an important place for these historical terms, certainly. Yet, they are not fully adequate to support masterful design of interventions based in knowledge of occupation.

By moving beyond the old categories, we can begin to examine how the subjective experience of occupation is made up of a unique mix of pleasure, productivity, and restoration. These three characteristics echo the familiar activity classes of play, work, and rest found in the occupational therapy literature. However, the radical difference is in the inclusive nature of the word and. In this approach, pleasure, productivity, and restoration are not categories among which one must choose to describe an occupation. Rather, they are three characteristics that exist simultaneously, to some degree, in all occupational experience. Every occupational experience is a blend of the three. This blending is central to the art of therapy to produce the most appealing therapeutic occupation for a client.

Productivity’s contribution to the appeal of an occupation. Humans love to be productive. Give us a game, a goal, a project, or an inspiring product to build and we are off and

Figure 2. The occupational design approach: Conceptual tools for building occupation-based practice. Note. From Occupation by Design by D. Pierce, in press. Philadelphia: F. A. Davis. Reprinted with permission from publisher.
running. Productivity seems to be central to our nature, perhaps built in by its support of our evolutionary success. Productivity extends beyond work to include the goal-focused dimension of all occupations. It often yields great personal satisfaction. To tap productivity in powerful intervention design, therapists must acquire a knowledge base that addresses productivity in theoretical and descriptive depth. Topics that might be included in such study are the history of industrialization and the Protestant work ethic (Gellner, 1988); the tie of work and identity (Christiansen, 1999); pride of craftsmanship (Cross, 1990; Dickie, 1998); the nature of unpaid work, such as housework and caregiving (Hassellkus, 1991; Primeau, 1992); typical career progressions and retirement (Healy, 1982); the dynamics of stress (Keller, Shiflet, & Bartlett, 1994); games and sports (Harris & Park, 1983); learning; and self-actualization (Maslow, 1954). If a client appears to be motivated by a therapeutic occupation high in the experience of productivity, the therapist can then draw on this knowledge of productivity’s elements to design an intervention with a satisfying outcome and clear goal achievement.

Pleasure’s contribution to the appeal of an occupation. Occupational therapists have always operated from an intuitive understanding of what is pleasurable in intervention. Making intervention pleasurable is a key to engagement. Perhaps this is why we still retain our use of play, crafts, cooking, and other usually pleasurable activities in our intervention repertoires, despite our difficulties in fitting such activities into medical settings. Because they are pleasurable, they are effective (Pierce, 1997b).

Pleasure is nearly the opposite of goal-focused productivity. Pleasure is process-focused. Pleasure is the degree of enjoyment a person experiences in an occupation. Influenced by our productivity-oriented society, occupational therapy has neglected research into pleasure in intervention, focusing instead on the seriousness and respectability of the study of purposefulness and intervention outcomes. It is natural when entering into a contract with clients to assist them in reaching certain goals that we should be primarily concerned with the productivity of that effort. Yet, the efficacy of our intervention also depends on its pleasure. Pediatric occupational therapists are especially aware of this and, so, depend heavily on play (Parham & Fazio, 1996). Even for those clients who can complete interventions through a determined commitment to outcomes, the addition of pleasure to the intervention has beneficial effects on mood, health, and recovery. Areas of understanding that would support a therapist’s creative use of the pleasurable dimension of occupation to enhance the appeal of intervention include sensory and limbic system processing (Guyton, 1991; Martin, 1996), arousal (Fisher, Murray, & Bundy, 1991), thrill-seeking activities, play across the life span (Cohen, 1987; Cross, 1990; Rubin, 1980), crafts and hobbies (Fidler & Velde, 1999), comedy and humor (Huizinga, 1950), the link between highly physical activity and endorphins (Davis, 1984), and aesthetics (Goodman, 1951). Applying a developed understanding of pleasure to intervention design is bound to enhance the appeal, and thus the efficacy, of interventions.

Restoration’s contribution to the appeal of occupation. Restoration is the subjective aspect of occupational experience that restores our energy levels and ability to continue to engage in our daily lives. Restoration is the most neglected and poorly understood of the three subjective dimensions of occupation. Though therapists may speak often about restoring persons, this is unlikely to slow the pace and demand of intervention. Despite Meyer’s (1922) seminal description of rest as a primary occupation to be considered by the emerging field of occupational therapy, little has evolved from this idea in subsequent occupational therapy literature.

An understanding of the restorative dimension of occupation must be based in an appreciation of the basic, life-giving occupation of sleep (Coren, 1996; Hobson, 1989; Pierce, 1997b). Indeed, sleep is one occupation without which we would soon die. Because culture has long construed sleep as a ceasing of consciousness, occupational therapy has followed suit by being concerned solely with waking occupations. However, research from the relatively new specialty of sleep medicine is changing the conceptualization of sleep from unconsciousness to a different form of consciousness (Carskadon & Dement, 1994; Moorcroft, 1989). To grasp the patterns that exist in the round of daily activity, that round must be viewed in its full 24-hour circadian rhythm (Moore-Ede, Sulzman, & Fuller, 1982). Sleep quality affects neural plasticity, healing, immune function, cognitive capacities, physical abilities, and mood (Coren, 1996; Pierce, 1997b). As an occupation, sleep is fascinating. It shows clear neurophysiological fluctuations, developmental changes, and susceptibility to environmental influence and disruption (Bliwise, 1994; Schnelle, Alessi, Ouslander, & Simmons, 1993; Sheldon, Spire, & Levy, 1982). Disturbances in this occupation are specifically named as medical diagnoses, such as sleep apnea (Carskadon & Dement, 1994). Many of our clients have undiagnosed sleep problems due to respiratory disorders, neurophysiologic disorganization, medications, disruptive sleep environments, shift work, poorly managed schedules, or extended stays in intensive care units. Until occupational therapists understand enough about sleep to assure that it is providing an adequate base for other occupations, efficacy in treating waking occupational patterns will not reach its full potential.

Waking occupations that are highly restorative are also important to intervention. For a client who is very disorganized, depleted, or discouraged, intervention may need to be not highly productive, but highly restorative. Clinical
judgment is required to discern what occupations a specific person may experience as restorative. People find waking restoration in different ways: quiet-focus occupations, such as needlework or woodworking; being in nature; viewing art; listening to music; quiet and solitude; socializing; a physical workout; self-care activities; or prayer and meditation. Of course, eating and drinking are also essential to restoration, though they can be done in ways that range from highly restorative to barely maintaining physiologic function. Occupational therapy is only at the beginning of exploring this important dimension in designing powerful, appealing intervention.

**Masterful design of appealing intervention.** Designing appealing intervention, and thus enhancing intervention power, requires a sophisticated understanding of the productive, pleasurable, and restorative dimensions of the subjective experience of occupation. Taken one at a time, the importance of each of the three dimensions’ contribution to the appeal of an occupation in intervention is easily argued. The true potency of using an occupational design approach lies, however, in the carefully blended combination of the three. High appeal is one source of therapeutic power. As such, appeal is a tool for the rapid building of the three bridges to strong occupation-based practice: a generative discourse, demonstration sites, and effective education.

**Intactness: Designing With Spatial, Temporal, and Sociocultural Context**

Intactness is the degree to which a therapeutic occupation occurs in the usual spatial, temporal, and sociocultural conditions in which it would usually occur for that client if it were not being used as intervention (Pierce, 1997a, 1998). Intactness can also be thought of as the naturalization of therapeutic occupation through the use of typical context. In the client’s own settings, the challenges, barriers, adaptations, and potential problem solutions are more clearly evident than they can be in virtual and unfamiliar environments, such as the clinic. In the customary context, the objects, cues, and complete sequences involved in an occupation of concern are physically real to both the therapist and the client. The client is not required to reason from a simulated experience to the real challenge encountered later in full context. The custom-fit nature of a client’s usual settings increases the generalizability and validity of the intervention.

In keeping with the individualistic western culture from which it springs, occupational therapy has traditionally focused more on the intraindividual characteristics of occupation than on the contextual dimensions. For this reason, it is likely that enhancing appeal through design with pleasure, productivity, and restoration will come more easily to therapists than will designing for intactness through the use of the client’s typical context. Strengthening the intactness of intervention is likely to shift intervention toward enhanced understandability for clients, greater holism, more community-based interventions, and increased efficacy.

**Spatial context as an element of intactness.** In occupational therapy, the spatial dimension of occupation that is beyond immediate physiology has been little explored, with some exceptions in the areas of tools, adaptive devices, and architectural adaptations (Trombly, 1989; Wilcock, 1998; Zemke & Horger, 1995). To effectively use the spatial context of occupation in intervention, occupational therapists require a more sophisticated appreciation of how spaces and objects support, shape, and inhibit individual experience (Holohan, 1986; Pierce, 2000; Rowles, 1991).

The most primary spatial aspect of human occupation is our embodiedness (Frank, 1986). Evolution has shaped the human with unique capacities to interact with the physical world: the upright pelvis, the senses, the hand, and the fertile and ceaseless conceptualizations of the neocortex. We experience our lives from within a framework of human neurophysiology: sensation, perception, ideation, and movement (Ayres, 1985). Occupational therapists are masters at understanding how occupational experience is shaped by human embodiedness, especially as it is affected by disability.

Human cultural adaptation is marked by the innumerable physical objects involved in our behavior (Hodder, 1989). A rich material culture is central to our nature as occupational beings. We survive and express ourselves through our objects: clothing, crops, vehicles, shelters, tools, toys, foods, medicines, communication devices, written materials, and aesthetic and ritual objects (Dickie & Frank, 1996). Ethnic traditions are marked by unique material culture and the action routines that support it, passed down through generations. Spaces, tools, and products can express identity: People often become deeply attached to them (Csikszentmihalyi & Rochberg-Halton, 1981). The qualities of the spaces in which people work and live, including the light, sound, size, smell, and perceptions of safety or threat there, are not abstractions to them (Holohan, 1986). They are places full of personal meaning and cultural symbols (Altman & Low, 1992; Rowles, 1991). Mapping and interpreting novel spaces begins the moment people encounter them (Evans, 1980; Kaplan & Kaplan, 1981; Neisser, 1991). Routines are overlaid on familiar spaces, enabling us to reach for toothbrush and then toothpaste in their usual spots without pausing as we think about other things. It is not within an abstract space, but within a familiar and experientially patterned place that humans engage in most of their occupations.

Using the spatial dimension to enhance the intactness of occupation-based intervention requires the therapist to comprehend spatial experience from the client’s perspective. How is embodiedness affecting experience? What are the usual spaces in which occupations of interest in the
intervention occur, and how are the routines mapped over those environments? What objects are of importance in the occupational pattern of the client in terms of function, identity, and personal meaning? What do the spaces and objects tell the therapist about the client? Are there barriers in cherished places that may be disrupting desired occupational patterns? How are the client’s typical occupational patterns laid out within home, workplace, or neighborhood? By developing such insights into the spatial dimension of a client’s daily experience, the therapist can design powerfully intact therapeutic occupations.

**Temporal context as an element of intactness.** Occupational therapists deal constantly with the temporal structures of human occupation in intervention, yet the occupational therapy literature on the temporality of human experience is extremely limited. The most basic temporal pattern of our occupations is the circadian rhythm (Moore-Ede et al., 1982; Swaab, Fliers, & Partiman, 1985). Entrained to the light, we move in a general synchrony of fluctuations in energy level and the relatively predictable round of activities required to meet our physiological needs, such as sleeping and eating meals. With the advent of electric lighting, the predominant pattern of rising with the sun and going to bed with the dark loosened somewhat, but most people continue in the same light–dark-driven pattern that has presumably regulated human occupation since the beginning of time (Coren, 1996; Pierce, 1997b).

The temporality of the life span is also basic to our experience of occupation. In western cultures we see birth as a beginning and death as an ending to our mortal existence. This linear and finite view of time poses existential challenges for the individual’s construction of an optimal occupational pattern over a lifetime. Some cultures see time in a more cyclic way, emphasizing the repeating patterns of similar events (Hall, 1983). The temporality of physiological and personal maturation also impose a general developmental shape on the occupational patterns of persons at different ages (Pierce, 2000; Royeen, 1994). Occupational therapists are commonly trained in developmental theories descriptive of life patterns across the life span. Such theories, however, are extradisciplinary and do not focus on changes in occupational experience with age.

Within these broad circadian and developmental templates, people construct a unique occupational pattern each day, orchestrating and completing a series of occupations (Clark, 1993; Segal & Frank, 1998). Within situational constraints, we manage the pace, duration, sequence, and timing of each occupation (Zerubavel, 1981). Habits and routines emerge from repeated patterns, simplifying management of the sequences (Zemke, 1994). Depending on the quality of engagement, time can feel like it is moving quickly or slowly. Memory allows reflection on the temporal patterns of our occupations and planning ahead in anticipation of their sequences and orchestration. Narratives are constructed and reconstructed to package experience in valued, storied configurations (Clark, 1993; Larson & Fanchiang, 1996). The cumulation of these daily patterns of experience over days or years can yield skill, adaptation, identity, and insight.

Using temporality to provide more powerfully intact intervention will require the therapist to reflect on the client’s usual temporal experience of the occupation being used in intervention or being targeted as an outcome. By matching the pace, sequence, timing, circadian rhythm, and developmental structures of a therapeutic occupation to those most natural to the client, the power of the intervention is enhanced. Therapists tend to be intuitive about doing this, scheduling, for example, activities of daily living training for mornings and feeding sessions at mealtimes. However, by bringing this dimension of occupation in intervention more cogently to mind, it can be used, improved, researched, and taught more effectively than it can be while remaining on a more intuitive level of clinical action.

**Sociocultural context as an element of intactness.** The sociocultural dimension of occupational context is fairly well-understood in occupational therapy compared with the temporal and spatial dimensions of occupational context. Occupational therapy has drawn strongly from the social sciences, especially anthropology, since the time of Reilly (1974), appropriating such informative key concepts as relationship, family, kinship, community, class, race, ethnicity, gender, stigma, values, ritual, symbol, adaptation, narrative, history, economics, and politics. Skillful use of these conceptual aspects of the sociocultural context is critical to the impact of occupation-based intervention.

A fairly concrete aspect of the sociocultural dimension of occupation is the degree to which it is interactive. A unique class of occupations, called co-occupations, can occur only in interaction with a partner (Pierce, 1997a). Teaching, caregiving, and playing tennis are examples of co-occupations. Some occupations occur as shared or parallel experiences, such as watching television with others. Occupations can also occur in complete solitude.

A critical aspect of the sociocultural dimension of occupation in intervention is power relations (Foucault, 1980). Recognizing status and power dynamics between the client and others, such as the therapist, family members, other service providers, insurers, and institutions, is important to negotiating systems of care and advocating effectively for a client. Feminist theory can also make important contributions here, explicating the power relations that lie in the social construction of gender (Smith, 1987). Intact intervention requires that the client feel, at minimum, the degree of power over the therapeutic occupation that he or she would if the therapist were not involved. Significant intervention gains targeting the most important goals of a client can only be accomplished by let-
tting go of the directive expert viewpoint and adopting a learning–collaborative view of intervention (Law, 1998; Rosa & Hasselkus, 1996).

Shared social and cultural expectations also shape our use of space and time. There is public space and private space, public time and private time (Hall, 1976, Zerubavel, 1981). Spaces can be crowded or empty of other people. Time can be social or solitary. Interpersonal space and timing of interactions are highly expressive of our identities in relation to others through eye contact, distance, touch, action synchrony, and turn taking (Hall, 1976). The complex symbolic meanings of places is passed down in the history of culture. Holidays, the 7-day week, and the workweek–weekend cycle strongly shape our occupational patterns through the established calendar (Zerubavel, 1981). Each culture has its own unique customs for constructing, valuing, and using the space and time within which its members experience occupations.

In terms of the sociocultural dimension, therapists are generally both insightful and intuitive in constructing intervention that is natural and well designed for and with individual clients. The founders of the field were attuned to such sociocultural concepts as habit training and return to a productive worker role after disability (Slagle, 1922; Quiroga, 1995). The framework of occupational behavior (Reilly, 1974) imported many informative social science concepts into the profession’s literature that enhanced understanding of the sociocultural dimension. More and more, awareness of diversity is being drawn on to enhance intervention. In regard to the spatial, temporal, and sociocultural contexts of occupation, it is in designing within the sociocultural dimension that occupational therapy interventions are most powerfully intact.

**Designing contextually intact therapeutic occupations.** By understanding the contextual dimensions of occupational experience, the therapist can design occupation-based intervention that is more effective through its intactness. Of course, because of institutional and pragmatic constraints, it is not possible to consistently enact intervention in perfectly intact context. Intervention must approximate intactness to the degree feasible. And, being attuned to intactness, the therapist will be ready to move toward intactness in both small and large ways when opportunities arise. Questioning and seeking out the most intact temporal, spatial, and sociocultural conditions for each therapeutic occupation is a direct avenue to more powerful intervention. Thus, the idea of spatially, temporally, and socioculturally intact intervention contributes another useful tool for rapidly building bridges to strong occupation-based practice.

**Accuracy: Designing To Target Client Goals Effectively**

Accuracy is the degree to which the therapeutic occupation precisely targets collaboratively developed occupational goals. A good illustration of the variable degrees of accuracy that can occur is to consider the way in which group interventions can sometimes fit the goals of some clients in the group better than it does others. The accuracy of occupation-based interventions depends on therapist design skill, collaborative generation of occupational goals, and precision fit of the intervention to the goal.

**Therapist design skill.** Occupational therapists require highly sophisticated design skills. The average workday of an occupational therapist is a series of high challenges to design skill (Pierce, in press). An essential process of successful occupational therapy is consistently producing creative solutions to fit the life problems and goals of individual clients, doing this thinking much of the time during complex action.

As other professions have discovered, to produce graduates who can consistently design effective and creative outcomes that fit client needs, it is necessary to be explicit and deliberate in teaching these skills. Architects in training learn the process of design through the studio method (Boyer & Mitgang, 1996; Koberg & Bagnall, 1991; Schön, 1987). In addition to other classes, architecture students share a studio in which assigned design problems are worked on under the supervision of an experienced architect. Discussions, frequent group critiques, and formal design juries are used to develop the students’ abilities to explicitly discuss the phases and strategies of the creative process in which they are engaged (Jones, 1981; Straub, 1978; Wade, 1977). Consumers are expected to give input throughout the development of architectural designs.

Engineering’s educational approach focuses on successful problem solving, although the creative process itself has received little explicit attention in engineering curricula until recently (Fogler & LeBlanc, 1995). While immersed in content, such as physics or electrical theory, engineering students are simply presented with challenging problems to solve outside of class. The World Solar Car Race, for instance, is a now-famous engineering school problem. Engineers are especially skilled at planning and implementing large, multitask projects.

In medical education, problem-based learning is being used to enhance students’ abilities to address the puzzles of daily practice through learning situations that emphasize self-directed and small group work on cases (Boud & Feletti, 1991; Royeen, 1995). The common features of the three professions’ educational approaches are the students’ engagement in constructed challenges, the requirement of creative thinking, and learning contexts that approximate practice settings.

Informed by the educational strategies of architecture, engineering, and medicine, occupational therapy can become better at educating practitioners in skillful occupational design. Of these three examples of professional education, architecture’s studio approach provides the strongest match to occupational therapy because both professions...
emphasize process, an arts aesthetic, consumer involvement, and the ability to reflect on and discuss the creative thinking required for effective practice (Koberg & Bagnall, 1991; Mattingly & Fleming, 1994; Pierce, in press). Drawing on the curricular strategies of other professions, occupational therapists can be equipped with highly developed design skills of self-motivation, problem analysis, idea generation and selection, complex implementation, and process evaluation. Such sophisticated design skills can equip graduates to consistently create accurate, and thus therapeutically powerful, occupation-based interventions.

**Collaborative occupational goal generation.** Highly accurate interventions must target occupational patterns as the end, or goal, of intervention and create those goals in collaboration with the client. An occupational pattern is an observable shape or regularity in the recurrences of similar occupations in a person's life (Pierce, 1997a, 1997b; Zemke & Pierce, 1994). Therapists, clients, and caregivers frequently identify occupational patterns as goals; for example, a school-based intervention goal could be for a student to independently use the lunchroom. To target broad, functional occupational patterns as an end of intervention, a substantial knowledge of typical occupational patterns across the life span is essential. The therapist must understand how the targeted occupational patterns are a part of identity, social acceptance, function, and health.

Trombly (1995), Gray (1998), and Cynkin (1995) described the use of occupation and activity as the means and ends of intervention. Setting occupational pattern goals with clients is using occupation as the end of intervention. Top-down, or occupation-focused, assessments contribute significantly to occupational therapists' ability to target occupational patterns as ends of intervention (Coster, 1998). If the intervention accurately targets an occupational outcome desired by the client, even the most mechanistic approach to intervention can be considered occupation-based. To set occupational goals that are well fit to the client requires strong collaborative goal-setting skills (Law, 1998; Rosa & Hasselkus, 1996). For this, a willingness of the therapist to release the powerful position of expert decision maker is essential. Highly developed abilities to interview, observe, and assist in prioritizing the client's and caregivers' needs are also required.

**Precise fit of intervention to goal.** Precision fit is simply a measure of how well the therapeutic occupation directly addressed the goals. The fit of the intervention to the goals can be weakened by many conditions common to intervention settings: limitations to intervention flexibility, such as standard protocols; inadequate time for intervention planning; attempting intervention in unsuitable environments or without adequate materials; or serving clients with diverse goals through group interventions. Even under such conditions the therapist can more effectively create therapeutic occupations that provide a powerful match to the client's needs by reflecting on the precision of the fit. This is hardly a new concept for occupational therapy, although it bears repeating.

Fitting a therapeutic occupation to client need is as old as the field. What is new here is the idea of reflecting on the degree of fit. Questioning whether an occupation-based intervention is being used is an ongoing theme of discussion in the profession (Wood, 1998). Less common is the questioning of how well the occupation used met a particular client's goals, what interfered in that effort, and what activity or setting might have fit the targeted goals better. Reflecting on the preciseness of fit after an intervention is a valuable form of productive dreaming about ideal intervention. Used consistently, such reflection will yield growth for the therapist and enhanced efficacy for clients.

**Accuracy: Therapist design skill, collaborative goals, and precision fit.** Accuracy will boost the therapeutic power of any intervention. Powerful effects are produced by combining highly developed design skills, collaborative goals as the ends of intervention, and a therapeutic occupation that is precisely fit to those goals. Occupational therapists are the consummate professionals in this holistic approach to intervention. Thus, to the previous conceptual tools of appeal and intactness is now added a third important tool for making the bridge from knowledge of occupation to strong occupation-based practice—accuracy.

### A Field's Translation: From Knowledge of Occupation to Designing for Therapeutic Power

The present is, paradoxically, both a fruitful and a dangerous time of congruence between our expanding knowledge base regarding occupation and the increased valuing of functional outcomes in health care. Occupational therapy must critically examine and re-create its traditions in theory and practice if it is to live up to its potential for providing clients with powerful interventions based on a deep understanding of occupational experience. To match the pace of change in health care, the profession must deliberately and rapidly build bridges between theoretical research on occupation and the powerful use of occupation in practice. A generative discourse around occupation-based practice, demonstration sites, and effective education are the bridges that are needed. Offered here are new conceptual tools for these bridge-building efforts: the subjective and contextual dimensions of occupation and the design process through which they can be translated into therapeutic occupations high in occupational appeal, intactness, and accuracy. ▲

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### References


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