Occupational Analysis and Synthesis

Abstract

The processes of occupational analysis and synthesis have been essential to the profession of occupational therapy since its founding. In this paper, the Conceptual Framework for Therapeutic Occupation (CFTO) is advocated as providing logical and practical guidelines for occupational analysis/synthesis. When learning to think like an occupational therapist, the first step is to analyze occupations observed outside the therapeutic context. Next, the student learns how to synthesize potentially therapeutic occupational forms. The culmination of occupational therapy education (also the essential act of an experienced therapist) is analysis/synthesis of occupational forms in accordance with one of the evidence-based models of practice. CFTO is compatible with all the occupational therapy models of practice (often called frames of reference). In this paper, two examples of occupational analysis and synthesis are given. In the first example, an occupational analysis involved a match between: a) the change in the person and b) the synthesis of compensatory occupational forms (e.g., adaptations of the environment) (Nelson, 2006). In the second, abbreviated example, a person making a transition from living dependently in a nursing facility to living independently begins to perform daily tasks, such as preparing meals, managing medications, and handling financial matters. In this article, the parallel idea is that occupational analysis involves a match between: a) perception (or misperception) of the physical aspects of the occupational form, and b) the symbolic understanding (or misunderstanding) of the sociocultural aspects of the occupational form.

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The reason for the founding of the profession was the use of occupation to enhance human lives (National Society for the Promotion of Occupational Therapy, 1917; Meyer, 1922). Please see a discussion of the history of therapeutic occupation in the 1996 Eleanor Clarke Slagle lecture (Nelson, 1997). Our profession’s focus on occupation as a method of therapy is what makes the profession unique and valuable to society.

One of the profession’s founders, Eleanor Clarke Slagle (1922), wrote about her «system of occupational analysis» (p. 16). As the widely recognized leader of early occupational therapy education, Slagle ensured that skill in occupational analysis was central to every student’s education. Slagle did not provide an abstract definition of occupational analysis and its components. However, from the examples she provided, it is clear that occupational analysis involved a match between: a) the basic characteristics of work tasks, crafts, games, self-care tasks, etc., and b) the capabilities of the person.

In this article, the parallel idea is that occupational analysis involves a match between: a) perception (or misperception) of the physical aspects of the occupational form, and b) the symbolic understanding (or misunderstanding) of the sociocultural aspects of the occupational form.

The definitions in Table I are taken from the Conceptual Framework of Therapeutic Occupation (CFTO). For extensive explanations of all CFTO concepts and their relationships with models of practice, please see Nelson (1988), Nelson (1994), Nelson (1996), and Nelson and Thomas (2003). The only change in CFTO terminology from prior publications is that now the term self-adaptation is used instead of simply adaptation. The reason is that occupational therapists persist in using the term adaptation for two entirely different concepts: a) the change in the person (self-adaptation) and b) the synthesis of compensatory occupational forms (e.g., adaptations of the environment) (Nelson, 2006). Please see Figure 1. An occupation starts when a person encounters an occupational form. When that encounter takes place, the person experiences meaning. In other words, the person makes some kind of subjective sense out of the occupational form. Meaning involves both:

- a) perception (or misperception) of the physical aspects of the occupational form, and
- b) the symbolic understanding (or misunderstanding) of the sociocultural aspects of the occupational form.

Meaning also involves the subjective, affective experience of the person encountering the occupational form. Once the person has meanings, the person subjectively develops purposes, desired outcomes associated with thought and emotion. Then the person actively does something in pursuit of those purposes: occupational performance. Occupational performance affects both subsequent occupational forms (impact) and the person’s own developmental structure (self-adaptation). Figure 1 is a graphic portrayal of the basic process.

The term «synthesis» was first used by Mosey (1986) to describe the joining together of various activity features into a coherent, appropriate whole to be presented to the person receiving therapy. However, long before Mosey suggested this concept label, the idea behind the word synthesis was foundational to the profession. In occupational synthesis, the therapist collaborates with the person to design a therapeutic occupational form. The therapist synthesizes an occupational form to make a just-right match to a person’s developmental structure, so that the person can find meaning and purpose, leading to active doing (occupational performance) and a therapeutic goal.
collaborating with the person in responsibilities of the therapist in beginning to learn about the special in therapy. Soon the student can tutor a «toolbox» for future work variety and complexity will constitute naturalistic occupations in all their student’s remembered analyses of ses or goals set by the occupa- tion (genetically unfolding physical changes) and by past occupational adaptations (personal experiences).

Table 1. Basic definitions in the Conceptual Framework for Therapeutic Occupation.

<table>
<thead>
<tr>
<th>Element</th>
<th>Definition</th>
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<tr>
<td>Purpose</td>
<td>Purpose is the felt experience of desiring an outcome (having a motive). When a person with a unique developmental structure interprets the occupational form (meaning), he or she often wants to do something about it (purpose).</td>
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<tr>
<td>Occupational Performance</td>
<td>Occupational performance is the voluntary doing of the person in the context of the occupational form.</td>
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<td>Impact</td>
<td>Impact is the effect of occupational performance on the person’s subsequent occupational form and on the occupational forms of others.</td>
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<td>Self-Adaptation</td>
<td>Self-Adaptation is the effect of occupational performance on the person’s developmental structure. In therapy, self-adaptation may occur when the person actively engages with a synthesized occupational form.</td>
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<td>Occupational Compensation as Therapy</td>
<td>Occupational compensation as therapy involves four elements: a developmental structure characterized by an intractable problem and latent capacities, synthesis of a somewhat atypical occupational form, substitute occupational performance, and comparable impact.</td>
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<td>Occupational Assessment</td>
<td>Occupational assessment involves (a) the therapist’s direct and indirect (reported) observation of a person’s occupational performances and impacts in the context of synthesized occupational forms, and (b) the drawing of inferences about the person’s developmental structure and/or occupational configurations.</td>
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Table 2. Dimensions of occupational form.

<table>
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<th>Dimensions of Occupational Form (All External to the Person)</th>
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<tr>
<td>Physical Dimensions</td>
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<td>Shapes</td>
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<td>Sizes</td>
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<td>Lighting</td>
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<td>Sounds</td>
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<td>Physical presence of others</td>
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<td>Temporal aspects:</td>
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<td>Symbol patterns</td>
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<td>Social norms</td>
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<td>Sanctions</td>
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<td>Roles</td>
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<td>Typical uses</td>
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<td>Typical variations</td>
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<td>Language rules</td>
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<td>etc.</td>
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1. the occupational form and any background information available about the person;
2. the person’s occupational performance and impact as well as meanings and purposes that can be inferred from the observation;
3. self-adaptations and impacts made by the person.

Therapeutic occupational analy- sis/synthesis can be defined as a five-step process of documenting:
1. the developmental structure (as evaluated) and the planned occupational form;
2. the predicted occupational, including predicted meanings, purposes, occupational performance, impact, self-adaptations, compensations, progress toward therapeutic goals, and new assessment information gained;
3. the actual occupational form and the actual occupational, including the actual occupational performance and impact as well as inferred meanings and purposes;
4. self-adaptations and compensations, including progress toward goals, and new assessment information; and
5. synthesis (re-synthesis) of future occupational forms.

This article will focus on the relationally complex process of professional, therapeutic occupational analysis and synthesis, which includes and surpasses all the steps taken in analyzing naturally occurring occupations. An occupational analysis/synthesis from a case study will be used here as the primary example. Chapman and Nelson (2014) described occupational therapy for a man with Parkinson’s disease. In this case study, the Role Acquisition model of practice (Mosey, 1986, Chap. 26) was used in combination with the Conceptual Framework for Therapeutic Occupation.

1. EVALUATED DEVELOPMENTAL STRUCTURE AND PLANNED OCCUPATIONAL FORM

This 78-year-old man with idiopathic Parkinson’s disease lived at home with his wife. He reported a vigorous, rich lifestyle of work and leisure in the past, but stated that his Parkinson’s disease had forced him to abandon almost all of the many occupations he had regularly performed outside the home. Assessments revealed bilateral bradykinesia; tremors; flexed and asymmetric posture; rigidity with impairments of range of motion in the spine, hips, and ankles; shuffling gait with occasional freezing; hypophonic speech associated with reduced expansion of the rib cage; mild cognitive impairment; depression; a restricted lifestyle; and a self-reported history of about one fall per month in addition to near-falls. In Mosey’s Role Acquisition model, the therapist is mainly a teacher of roles, tasks, and skills. As a learner, this man needed unambiguous instructions, frequent demonstration, actual practice in simulated and naturalistic occupational forms, and supportive feedback focusing more on his successes than fail- ures. For more information, please see Chapman and Nelson (2014).

The Role Acquisition model posits that the person is especially likely to learn an occupation if he or she has a special interest. This man’s most highly rated goal was to continue to attend his church service with his wife each Sunday morning. The planned occupational form can be labeled «church attendance.» Please see Table 2 describing the possible physical and sociocultural dimen-
sions of an occupational form. Except for the occasional student paper, occupational forms are rarely documented. One of the most difficult tasks for a student is to identify the most relevant dimensions of a particular occupational form, while choosing not to record less important or irrelevant details. For example, in this case certain rituals of the church service were highly relevant whereas the exact etymologies of the words spoken by fellow parishioners were much less relevant, even though technically part of the occupational form. For a physical example, anything obstructing balance and gait were highly relevant, but the colors within the church were not so relevant (even though in a different occupation, the colors of the priest's vestments might be highly relevant).

Socioculturally, the occupational form of church attendance involved a lifelong affiliation with Roman Catholicism. Indeed, he had been baptized as an infant in this same church. All religions have powerful symbols and norms; for example, this man's religious beliefs placed special importance on the taking of communion. In the church service, different people have defined roles, whether the priest, those assisting the priest, the choir, or members of the congregation. As a member of the congregation, the man was expected (if possible) to recite prayers and sing hymns in defined temporal sequences and pitches. The parish was also a social center for fellowship. His wife typically accompanied him to church, and, except for medical appointments, going to church together was their sole remaining reciprocal occupation outside the home. The plan of the therapist was to blend into the social situation while providing minimally necessary, discreet cues and supports.

Physical aspects of the occupational form included the route from handicapped parking to the church pew; the pew kneeler and seat; books of hymns and liturgy; the route from the pew down the aisle to the communion area; the church vestibule where standing was the norm (typically the site for fellowship before and after the formal service); and, the physical presence of fellow parishioners, some of whom were likely to address the man. Physical assistance by the therapist was not planned but was possible given challenges in the actual occupational form.

To prepare for the occupation, the therapist engaged the man in a series of preliminary therapeutic occupations (each of which had form, meaning, purpose, performance, and self-adaptation in its own right). The preliminary series emphasized high-amplitude movements and addressed static and dynamic standing balance; sustained safe walking; increased chest expansion to improve vocalization; transitions from kneeling to standing to sitting; dressing in his suit, tie and overcoat; car transfer; seatbelt fastening (a particular problem because of his inability to dissociate his upper trunk from his lower trunk); and backing his car out of his driveway (again, a problem due to a lack of trunk and neck rotation).

2. PREDICTED OCCUPATION
When synthesizing an occupational form, the therapist makes predictions as to the meanings, purposes, performances, impacts, adaptations, and compensations expected to occur in the occupation. For this occupation, the therapist predicted very high levels of meaning and purpose. The man had listed church attendance as his most important occupation. Another indication of a high level of meaning was that he spent hours reading his clothes and car for this weekly outing.

The rituals of the church service are designed to foster a spiritual experience, especially in a man professing a lifelong commitment. For someone with a recent history of depression and increasing apathy, the church service provided an opportunity for meaningful engagement cognitively, socially, emotionally, and spiritually. Socialization before and after the service involved emotionally charged, long-term relationships, some of which were life-long. Church attendance also involved emotions evoked by spending time with his wife. He described the occupation as "taking my wife to church."

The therapist predicted that one of his purposes would be recognition as a cherished member of the congregation. He also seemed to want to reassure himself and his wife that he could still go out and do things that were important to both of them.

The therapist's concerns focused on the man's perceptual and functional abilities. Given his balance impairment and history of falls, the therapist was particularly concerned about his somatosensory self-monitoring. Fatigue was predicted, particularly after the formal service while standing and conversing in the vestibule. Interactions in a small crowd and inadvertent jostling could lead to a fall. Predicted performances and impacts included successful passage from car to vestibule to pew to communion area to pew, and back to car.

Because of anticipated fatigue, the man's posture and gait might decline in quality toward the end of the occupation, with increased shuffling and forward flexion. Reciprocal engagement in conversation, recitation of prayers, and consumption of the communion host were expected. The therapist anticipated that the man might have difficulty in breath support for vocalizations, especially while singing hymns.

This planned occupation was oriented to therapeutic goals of self-adaptation, not compensation. It should be noted that compensation took place in other therapeutic occupations at other times with this man, mostly via assistive devices for self-care and home modifications. In this occupation, anticipated adaptations directly related to the therapist's goals included increased self-efficacy in church attendance, reinforcement of safe mobility, generalization of breathing strategies to new situations, enhanced mood and affect, and maintenance of a highly valued occupation in his configuration. When a person maintains an ability that would otherwise be lost, CFTO classifies this type of maintenance as self-adaptation.

3. ACTUAL OCCUPATIONAL FORM AND OCCUPATION
Frequently the actual occupational form is somewhat different from what was planned. In this case, a handicapped parking sign provided an over-challenge to the man's visual-perceptual meaning. The sign was placed between two parking spots, and the man parked in the middle of the two parking spaces, directly behind the sign.

A second unanticipated challenge was that the incline of the ramp from the parking lot was steep with no railing, so the therapist provided standby assistance. A third problem was that the door to the church was too heavy for him to open without loss of balance, so the therapist opened the door. Finally, the therapist discovered that there were two, shallow, wide-tread marble stairs, without railings, to the communion area. Therefore the therapist provided minimal contact guard while rising and descending those steps.

Other aspects of the occupation unfolded mainly as planned. He participated in the ritual of making the sign of the cross with holy water, but, as anticipated, he did not attempt to genuflect prior to entering the pew. He participated in both ritualistic responses and hymns without reference to the book. His mood was softer than others. Before and after the service, fellow parishioners approached the man and initiated friendly conversations. He spoke softly with minimal facial expressions, typical of Parkinson's. However, the focus and movement of his eyes suggested a high degree of interest (a gleam in the eyes). His verbal responses were appropriate, but monotonic and sometimes delayed. He did not initiate conversations.

Toward the end of the post-service socialization, his posture became increasingly forward-flexed, and his shuffling became more pronounced. Later he confirmed that these were indications of fatigue. However, he demonstrated no freezing. He reported a high level of satisfaction with the occupation.
The man was weekly church attendance secondary to Parkinson’s disease. He drove a wheelchair and had a low-effort, hydraulic, push-button door opener to the vestibule, and a hand rail on the steps leading to the communion area.

The therapist also continued to synthesize occupational forms in the home that would help him get ready for church safely and efficiently. The therapist recommended a driving evaluation, given declining skills secondary to Parkinson’s disease. Over time, the therapist continued to work out collaboratively with the student therapist. His new apartment (impact of his occupation) was an evolving occupational form that appropriately challenged future problem-solving, planning, organization, and time management.

The initial occupational form could be labeled “Possessions Management.” The student therapist planned to take the man to church safely and efficiently.

The student learns how to conduct numerous analyses/syntheses mentally and how to document intervention sessions in a highly efficient manner.

Misko, Nelson, and Duggan (2015) used the Model of Human Occupation (Kielhofner, 2008) in combination with CFTO in case studies of persons with HIV/AIDS. The example below illustrates an occupational taking place discontinuously over several days.

1. EVALUATED DEVELOPMENTAL STRUCTURE AND PLANNED OCCUPATIONAL FORM

A fifty year old man, HIV positive for twelve years, had recently moved into his own apartment after two years living dependently in a nursing home. Because of transverse myelitis and neuropathy, he primarily mobilized in a power wheelchair. His personal narrative included a strong commitment to independent living but also self-doubts concerning personal causation. Most of his possessions remained piled in boxes, and this was in conflict with the value he placed on order and functionality. The initial occupational form could be labeled “Possessions to be unpacked in setting up his apartment.”

2. PREDICTED OCCUPATION

The student therapist predicted problems of volition (doubts concerning personal causation and insufficient knowledge of personal capacity) in the early stages of the occupation. A high level of energy was expected because he repeatedly stated he needed to get his apartment organized in order to live independently. His mobility, endurance, and problem-solving skills were in danger of being over-challenged, so the student therapist planned to take a hands-on, collaborative approach in the early stages of the occupation.

3. ACTUAL OCCUPATIONAL FORM AND OCCUPATION

The student therapist’s expectations were largely fulfilled. First they collaboratively unpacked and set up his computer station, with numerous adjustments made as he tested and refined the design. The student therapist gave constructive feedback concerning safe mobility while encouraging his autonomy in decision-making. In subsequent days, volunteers from social service agencies assisted the man with most of the physical aspects of unpacking while he made the decisions concerning placement. In other words, he took on the same role with the volunteers that he had worked out collaboratively with the student therapist. His new apartment (impact of his occupation) was an evolving occupational form that appropriately challenged future problem-solving, planning, organization, and time management.

4. SELF-ADAPTATIONS, COMPENSATIONS, AND ASSESSMENT INFORMATION

With initial occupational success, the sense of personal causation and volition increased. The man quickly learned the role (habituation in the Model of Human Occupation) of directing others. Energy conservation in directing others is a compensation for impairments of mobility and endurance. Self-knowledge of his capacities and incapacies was reinforced. Ultimately he expanded his personal narrative by stating “I feel like I can just go do things again…. I’ll be OK.” In terms of occupational assessment, the student therapist determined that he needed additional practice in strategies for safe mobility, particularly in restricted spaces such as closets where wheelchair use was awkward.

5. RE-SYNTHESSES FOR THE FUTURE

After successes in instrumental occupations around his apartment, the therapist assisted the man in his desire for participation in the broader community (markets, restaurants, theatres, etc.). A major focus was the prevention of falls in community-based occupational forms.

Conclusion

The Conceptual Framework for Therapeutic Occupation is a logical system for occupational analysis and synthesis. CFTO as an overall system and each concept in CFTO are designed in accordance with the logical rules of precision, parsimony, exclusivity, and exhaustiveness (rules described in Nelson, 2006). In the examples above, rigid segregation among terms has not been used for the sake of fluidity and comprehension. But it is possible for a student of CFTO to parse each word in the above examples into the basic terms: occupational form, development model, structure, meaning, purpose, occupational performance, impact, and self-adaptation. Logic is expected in a true profession and is necessary in science. CFTO is also compatible with all models of practice, and provides a systematic way to compare models of practice (Nelson, 1997).

Whether or not the Conceptual Framework for Therapeutic Occupation or some other system is used, occupational analysis/synthesis remains the essential and defining occupation of the occupational therapist. Since the days of Eleanor Clarke Slagle, this process has been the profession’s unique contribution to health care. Our specialty is to know about occupational forms in all their variety and to perceive the special capabilities of persons so that a therapeutic match can be made. Given its centrality to the profession, occupational analysis/synthesis should be the primary focus not only of practice but also of education and research.

References


