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Part IV

Ways of doing in occupational science

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The case for multiple research methodologies

Valerie Wright-St Clair

Listening to the philosophical meanings within Leunig’s (2001) letter from the imaginary Mr Curly of Curly Flat to his friend, Vasco Pyjama, provides a good starting point for considering the case for multiple methodologies in occupational science. The letter begins:

Dear Vasco, it is the shortest day here in Curly Flat – the winter solstice. We had a very interesting time trying to measure the shortest day. How does one measure a day? Length is one matter but depth and width are just as important. For instance, a short day may be very deep or a long day may be shallow and narrow. What seems to be vital is whether or not the day is spacious, in which case the roundedness of the day is perhaps the most important factor. (Leunig, 2001, p. 49)

Leunig’s (2001) whimsical letter points toward important phenomena and questions for occupational scientists to grapple with. Some come to mind. What is one measuring when setting out to understand occupation and how ought things be measured? How can we come to know something of the ‘length’ of occupation, or of its ‘depth’ or ‘breadth’ for that matter? Could it be that what is measured merely proffers a shallow and narrow knowledge of occupation? And, how might we come to know occupation in its fullness or ‘roundedness’? The quality of roundedness indicates an understanding of occupation that encapsulates knowledge of length and depth and breadth all together. Each dimensional

1 perspective reveals something the others do not. Roundedness suggests both the stillness of
2 coming to ‘know’ occupation in itself, and the restlessness of seeking to know occupation in
3 ways that are not yet understood. Roundedness symbolizes, paradoxically, qualities of
4 being encapsulated within a boundary yet, at the same time, being spacious and open to
5 expansion or contraction. And, as with the hermeneutic circle (Gadamer, 1975/2004),
6 coming to understand the parts of knowledge about occupation suggests a greater
7 understanding of the whole of it will be gained; while grasping some of its wholeness will
8 lend different and deeper ways to understand the parts.

9 This chapter begins by exploring the meaning of occupational science being a
10 ‘science’ and how different research questions can serve the development of occupa-
11 tional science knowledge. The complexity of identifying what is and what is not
12 occupational science research is discussed. Then, in making the case for multiple
13 methodologies, a forward-looking framework for occupational science’s research
14 agenda is used to illustrate how one core question, the relationship between occupation
15 and health, might be examined and potentially explained. Rather than occupational
16 science knowledge growing organically, as has predominantly occurred, the way
17 forward will be best served by the considered exploration of socially relevant questions,
18 which calls for the use of multiple research methodologies.
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21 **The science in occupational science**

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24 Before moving on to consider the case for multiple methodologies, it is worth stepping
25 back to think about what it means for occupational science to be a ‘science.’ Stemming
26 from the Latin word *scientia*, science means ‘knowledge’ (Onions, 1966, p. 797).
27 Therefore occupational science, as a science, is concerned with the methodical
28 processes related to building knowledge. The inclusion of science in the name indicates
29 the field holds itself up to be involved in the scientific endeavour. At its most simplistic,
30 the scientific endeavour is the pursuit of understanding, explaining and predicting
31 things in the world (Okasha, 2002). From a conventional, empiricist viewpoint, the
32 scientific nature of occupational science would mean it was underpinned by the
33 fundamental assumption that objective realities or truths about human occupation
34 exist. Accordingly, the research methods used would be characterized by objectivity,
35 and analysing observational data received through the senses, ‘independent of thinking
36 and thoughts’ (Hung, 2006, p. 3). While this perspective is widely adhered to in
37 Western societies, it fails to encapsulate contemporary understandings of what it is that
38 makes occupational science, or other sciences, scientific by nature.

39 Two decades ago, the American Association for the Advancement of Science (AAAS)
40 (as cited in Gauch, 2003) espoused a more liberal view by defining science as ‘the art of
41 interrogating nature’ (p. 98). From this standpoint, occupational science would be
42 characterized by questioning, but not just any questioning; thoughtful, methodical
43 questioning of things within the field of interest. This fundamentally different view-
44 point means science is more than the production of knowledge by way of a rigorous
45 sequence of research steps. It reframes science as a liberal ‘art’ (Gauch, 2003). In accord
46 with this idea, occupational science, like other sciences, would be a ‘highly creative
47 endeavour’ (AAAS, 1993/2009). Multiple and highly variable pathways would be open

1 to occupational scientists engaging in the process of knowledge production. Phenomena
2 of interest would be ‘multiply realizable’ (Hitchcock, 2004, p. 160), and hence, open
3 to a multiplicity of research methodologies arising from different types of questions.
4 From this liberal viewpoint, scientists doing occupational science would differ:

5
6 *in how they go about their work; in the reliance they place on historical data or on*
7 *experimental findings and on qualitative or quantitative methods; in their recourse*
8 *to fundamental principles; and in how much they draw on the findings of other*
9 *sciences ... [yet there would be] common understandings among them about what*
10 *constitutes an investigation that is scientifically [trustworthy]. (AAAS, 1989/1990a,*
11 *cited in Hitchcock, 2004, p. 160)*

12
13 Thinking of science as the art of questioning or interrogating things in the world also
14 suggests that occupational science’s scientific endeavour is more than the research itself.
15 Questions do not just appear out of nowhere; they arise from particular interests which
16 in turn are embedded in historical and philosophical contexts (Gauch, 2003). In other
17 words, it can be assumed that all science is underpinned by conceptual ideas and
18 theoretical frameworks which reveal and restrict the field of interest. Therefore, doing
19 occupational science would also involve developing and articulating theory, conduct-
20 ing thought experiments (Hitchcock, 2004) related to the application of theory, and the
21 thoughtful derivation of new phenomena of interest (Hung, 2006). The theoretical and
22 the methodological cannot be disentangled in the quest for understanding things in the
23 world. Furthermore, common sense suggests not all things in the world are observable.
24 As a consequence, the case is strengthened for raising different types of questions which
25 call for the creative, considered use of multiple methodologies.

26 Naming occupational science, as a science, is a hopeful standpoint. It shows a
27 confidence that there are innumerable things to be explored within the field of interest.
28 It expresses an assumption that things of interest in the world can be, at least partially,
29 known and understood. And it lays the foundation for building a research methodology
30 repertoire that is at once diverse and seemingly limitless in subtleties of design.

31 32 33 **The occupation in occupational science** 34

35
36 Until now, the discussion has focused on what makes occupational science a science. The
37 next question seems to be what is it that makes this science occupational in nature? To be a
38 field of interest, something must act to bring the otherwise disparate science activities into
39 connection and to bind things together. The notion that all science is carried out within a
40 ‘paradigm,’ or overarching theoretical framework, seems to help (Hung, 2006). First
41 described by Kuhn (as cited in Gauch, 2003), a paradigm is ‘a strong network of
42 commitments – conceptual, theoretical, instrumental, and methodological’ (p. 84). So
43 what is it that occupational scientists collectively hold an allegiance to? What forms the
44 common ground and unites occupational science in its scientific endeavour? Clark (2006)
45 asserted that ‘occupation’ is occupational science’s ‘unifying operative paradigm’
46 (p. 170). Looking at the occupational science literature suggests a ‘strong network of
47 commitments’ does exist. While the topics are highly variable, the theoretical discussions

1 and research questions circle around explorations and explanations of human occupa-
2 tion. The fact that there is not one, universally accepted, definition of ‘occupation’ could be
3 seen to destabilize the scientific foundations.

4 However, the view I would put forward is that multiple, sometimes competing,
5 definitions serve the scientific endeavour. Occupational science may only flourish in a
6 context in which divergent views are voiced and debated and knowledge development
7 is celebrated as being continually in flux. Rather than trying to seek certainties,
8 occupational science will be best served by theorists and researchers who embrace
9 scientific uncertainty, accept all knowledge is merely an approximation of things which
10 are multiply realizable, and make a commitment to the continual revision of knowledge
11 (AAAS, 1989/1990a; Gauch, 2003). While occupational scientists ought to reject the
12 idea of finding and explaining absolute truths (AAAS, 1989/1990a), it is significant that
13 some ‘truths’ endure. For example, the presupposition that humans are essentially
14 occupational beings (Molineux & Whiteford, *in press*; Yerxa *et al.*, 1989) binds the
15 thinking and doing of occupational science.

16 As well as ‘knowledge,’ science may have originally meant ‘to separate one thing
17 from another, to distinguish’ (Harper, 2010). In this way, occupational science ought to
18 be distinguishable from other sciences. As a young science, it seems the boundaries of
19 what is occupational science knowledge, and what is not, are yet to be collectively
20 defined. Accepting, as the distinguishing characteristic, that occupational science ‘is
21 ultimately concerned with the exploration of human occupation in its totality’ (Molke,
22 Laliberte Rudman, & Polatajko, 2004, p. 277) suggests the field is bounded but not
23 tightly constrained. Returning to the opening thoughts, holding such a distinction
24 seems to encourage a rounded approach to the scientific endeavour, allowing
25 the restlessness of exploration of occupation in ways that are not yet understood.
26 Indeed, the parameters of occupation open to study are varied and still expanding
27 (Hocking, 2009). As knowledge within occupational science develops it is important to
28 leave the field open to ways of knowing the totality of occupation that are not yet
29 visible. Nonetheless, unless the parts of research knowledge cluster together into a
30 complex, unified whole, occupational science is at risk of losing its way as a distinguish-
31 able scientific field. The use of multiple methodologies alone might serve the development
32 of knowledge, but it is not enough to bring about the roundedness of occupational
33 science without human occupation as its distinguishing and unifying paradigm.

34 Occupational science activity

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39 In everyday language, scientific activity is sometimes spoken of in terms of being ‘hard’
40 science or ‘soft’ science; the former referring to methods using deductive inquiry and
41 the latter to forms of inductive, interpretive inquiry. Yet these colloquial expressions
42 are unhelpful as they suggest one form is inherently more valuable than the other.
43 Speaking of scientific activity as being hard science holds connotations of it being
44 rigorous and durable, giving a solid knowledge foundation. On the other hand, saying
45 science activity is soft science carries nuances of it being limp or flexible, yielding weak
46 knowledge. The language of scientific activity needs to move beyond such value-laden
47 distinctions.

1 Interestingly, a systematic comparison of named ‘occupational science’ articles
2 published in the years 1990 and 2000, revealed, at each point in time, only 30%
3 could be classified as reporting basic or, in a minority of cases, applied research activity
4 (Molke *et al.*, 2004). This means over two-thirds of occupational science publications
5 in both years, a decade apart, were discussion-based or theoretical in nature. In a
6 similar systematic analysis of publications across the decade from 1996 to 2006, nearly
7 44% were classified as research (Glover, 2009). The findings of these two studies are
8 not directly comparable as they used different approaches, so it cannot be concluded
9 that occupational science research activity increased by 14% between 2000 and 2006.
10 However, the second study did show a significant increase in the proportion of research
11 articles published during the later period of 2003 to 2006 (Glover, 2009). But not all
12 occupational science research makes it to publication. In an almost identical timeframe,
13 2002 to 2006, an analysis of the scholarly presentations at the annual Society for the
14 Study of Occupation: USA (SSO:USA) symposia revealed 59% were research-based
15 (Pierce *et al.*, 2010). While the trend looks promising, taken together, these analyses
16 suggest occupational science’s research-informed knowledge, as compared to its
17 theory-based knowledge, is underdeveloped. This seeming imbalance may be a natural
18 consequence of the emergent nature of the scientific field; the early thinking prepares
19 the ground from which research questions grow.

20 Given the assumed complexity of human occupation, and thus the richness of
21 understandings to be mined, occupational science has always stood on the ground of
22 being an interdisciplinary academic discipline. Such an approach ‘demands a fresh
23 synthesis of interdisciplinary perspectives to provide a coherent corpus of knowledge
24 about occupation’ (Zemke & Clark, 1996, p. ix). The full potential of interdisciplinary
25 research collaboration lies before occupational scientists and is still emphasized as
26 holding the most promise in the way forward (Molke *et al.*, 2004). Working in
27 partnership with scientists from different academic disciplines to ‘interrogate’ human
28 occupation in its totality bodes well in the scientific endeavour of uncovering new
29 questions to ask. Inevitably, a rich diversity of scientific questions will call for using a
30 multiplicity of methodologies in order to best answer the questions raised. To illustrate,
31 bringing an occupational science focus to the field of sport and recreation is leading to
32 innovative work being done on understanding the consumer behaviour, or occupations,
33 of sports fans (Humphries & Smith, 2006). Interpreting ‘sport fandom’ as an occupation
34 offers a fresh way for event managers to take account of the meaning of what fans do.

37 The call for multiple methodologies

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41 *An enormous multiplicity of strands of evidence, many of them weak and ambiguous,*
42 *can make a coherent logical bond whose strength is enormous.* (Gauch, 2003, p. 93)

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44 The call for using multiple research methodologies within the emergent discipline of
45 occupational science is nothing new (Clark, 2006; Glover, 2009; Wilcock, 2003;
46 Zemke & Clark, 1996). From its inception, the place of ‘qualitative’ research method-
47 ogies was claimed to be ‘more suited than experimental methods for the study of

1 occupation because of occupation's richness in symbolic meanings' (Zemke &
2 Clark, 1996, p. viii). This premise seems to live out in the nature of research produced
3 in the name of occupational science. In a systematic quantitative analysis of the research,
4 starting with the year of occupational science's inception, Molke *et al.* (2004) found 'in
5 1990 all three research articles were classified as quantitative, while in 2000 three were
6 quantitative, two were mixed and eight were qualitative in nature' (p. 274). It is surprising
7 that, in spite of the increase in research activity within the field, the number of
8 'quantitative' studies published remained the same a decade later. Similarly,
9 Glover's (2009) analysis of the decade ending in 2006 found just over 70% of occupa-
10 tional science research publications employed a qualitative research methodology. The
11 proportion is greater again in Pierce and colleagues' (2010) analysis of the first five years of
12 SSO:USA meetings, where 84% were found to be qualitative in nature. This means only 1
13 in 13 scholarly presentations reported results of quantitative research. A further 1 in 10
14 used a mixed methods design. However, discussing occupational science research in terms
15 of a quantitative–qualitative dichotomy is unhelpful for illuminating the multiplicity of
16 methodologies being used. Usefully, Pierce *et al.*, throw a light on the qualitative
17 methodologies underpinning the SSO:USA presentations. Grounded theory was most
18 common, used in one out of five studies, followed by narrative inquiry, phenomenology
19 and ethnography. Yet, going a step further, the call for merely using multiple methodolo-
20 gies is a hollow one in the absence of a greater purpose for doing occupational science
21 research. So, what are occupational scientists called to question and why?
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24 **The call to question**

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27 The scope of what occupational science is called to question is pointed to within the
28 International Society of Occupational Science's (Asaba *et al.*, 2007) definition of
29 occupation as 'the various everyday activities people do as individuals, in families
30 and within communities to occupy time and bring meaning and purpose to life' (p. 1).
31 Inherent in the words are philosophical assumptions about occupational science's
32 human, social and political responsibilities. For occupational science to be relevant
33 within the societies it serves, the call to question occupation in its fullness is to identify
34 the questions that matter for humanity. At the end of the day, 'a science that asks life's
35 big questions is more human and more appealing than an impoverished science
36 divorced from the humanities' (Gauch, 2003, p. 154). Judgements regarding occupa-
37 tional science's human, social and political relevance will rest with its potential to
38 address, at least in part, the big challenges faced by humans and nations.

39 So what are some of the pressing global and local challenges facing human kind? The
40 list is expansive and disquieting. Many challenges relate to reducing the threats toward
41 international peace and security such as eradicating the global growth of organized
42 crime and drug trafficking, terrorism, and civil conflict (UN, 2010). Others are
43 concerned with promoting fundamental human rights such as protecting the cultural
44 rights of indigenous peoples, the humane treatment of asylum seekers and refugees, the
45 protection of children affected by poverty and conflict, the equality of women's social
46 participation, the protection against sexual abuse and exploitation, the elimination
47 of human trafficking (UN, 2010), and the reduction of HIV-related stigma and

1 discrimination (UNESCO, 2010). Yet other challenges relate to global ecology such as
2 responding responsibly to climate change, natural resource degradation, population
3 growth and the changing age structure of populations, human displacement and
4 homelessness following natural disasters, and the increasing urbanization of popula-
5 tions (Worldwatch Institute, 2008). Lastly, a further cluster of challenges relate to
6 social development for improving the everyday lives of young people, families, older
7 people, and people with disabilities, reducing youth unemployment, creating sustainable
8 communities, eradicating poverty (UN, 2010), promoting basic literacy and education
9 for all peoples, building community capacity (UNESCO, 2010), promoting equitable
10 health development, and fostering water, food and health security (WHO, 2010).

11 Science, and by implication, occupational science, has its part to play in creating a
12 better world for all. Looking forward, ‘what the future holds in store for individual
13 human beings, the nation, and the world depends largely on the wisdom with which
14 humans use science and technology’ (AAAS, 1989/1990b). In accord with this view,
15 occupational scientists are already vocal in their concern for addressing occupationally
16 focused, social justice issues; in other words, ‘occupational justice’. Molineux and
17 Whiteford’s ([in press](#)) proposal for the occupational science research agenda to be
18 guided by a framework consistent with ‘the levels at which occupation occurs and is
19 organized’ (p. xx) means questions would be raised across a matrix of concerns facing
20 individuals, families, communities and populations. Contemporary approaches to
21 public health research suggest the levels of ‘organizations’ and ‘policy’ be added when
22 studying a comprehensive array of health determinants and disparities (Steckler &
23 Linnan, 2002). In fact, the sheer complexity and diversity of what ought to be explored
24 within an occupational science research agenda (Molineux & Whiteford, [in press](#))
25 means the full repertoire of methodologies will be called for in the scientific endeavour.
26 The following section focuses on one overarching concern and, in doing so, illustrates
27 how the case for multiple methodologies in occupational science is cemented.

30 **Questioning the relationship between occupation and healthfulness**

33 One enduring idea underpinning occupational science is the assumed relationship
34 between the engagement in occupation and the healthfulness of peoples and popula-
35 tions (Wilcock, 1993; Yerxa, 1998). This essential claim demands a central place
36 within occupational science’s research agenda (Molineux & Whiteford, [in press](#)).
37 Bringing together some of the big challenges facing human kind, the levels at which
38 occupation occurs, and the demand to understand the association between human
39 occupation and healthfulness, reveals how multiple methodologies must be used to take
40 occupational science forward in a socially relevant way.

43 ***The individual, occupation and health***

45 In 2009, under the United Nations High Commissioner for Refugees (UNHCR)
46 programme, 112 400 refugees were resettled across 19 nations (UNHCR Division of
47 Programme Support & Management, 2010). The resettled individuals, one third of

1 whom were Iraqi, highlight the plight of more than 10 million refugees living in, often
2 prolonged, asylum (UNHCR Division of Programme Support & Management, 2010).
3 Resettlement in a 'third country' is the last option. Each year, Australia, Canada,
4 Finland, New Zealand, Norway, Sweden, the United Kingdom, the United States and
5 other host States, participate in the global humanitarian effort by offering a new start in
6 a new place. Occupationally, as the challenge of everyday living in refuge ends, that of
7 making the host country 'home' is just beginning. Importantly, diverse research
8 evidence suggests individuals' trauma recovery, health and well-being can be positively
9 influenced by the resettlement experience (Sampson & Gifford, 2010). Yet resettlement
10 is a slow, intricate process with a mix of State and Non-Governmental Organizations
11 typically offering 'cultural orientation, language and vocational training as well as
12 programmes to promote access to education and employment' (UNHCR: The UN
13 Refugee Agency, 2010).

14 Occupational science is thriving in the major resettlement nations, and therefore is
15 well placed to support this pressing humanitarian endeavour. Approaches that describe
16 or address the subtleties of everyday living, social participation, individuals' traditional
17 and new occupational needs and expectations, or the meaning of participation in
18 otherwise hidden, everyday occupations have the potential to add value to existing
19 resettlement efforts. Research methodologies such as ethnography, using in-depth
20 individual, or focus group, interviews and participant observation to understand
21 cultural phenomena such as how participation in everyday occupations influences
22 ethnic identity for recently resettled refugees, or what influence cultural diversity has on
23 occupational patterns within local communities, may reveal new occupationally
24 focused understandings to inform resettlement programmes. On the other hand,
25 epidemiological methodologies or secondary analysis of existing data might be used
26 to build an understanding of the pattern and prevalence of refugee settlement in local
27 communities. Survey methods such as such community mapping would give informa-
28 tion about local amenities and environmental resources. Ultimately, other than
29 building knowledge itself, descriptive occupational science research has the greater
30 potential to inform applied studies and occupationally focused programmes aimed at
31 advancing the healthfulness of people from refugee backgrounds.

32 33 34 35 ***The family, occupation and health***

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37 Research suggests that, for young people, sitting down with the family for meals and
38 eating breakfast are associated with a better nutritional profile that continues into
39 adulthood (Adolescent Health Research Group, 2008). From an occupational perspec-
40 tive this implies that food occupations within the home context are an important
41 predictor of health and well-being outcomes. Recently, a large, representative survey-
42 based study of New Zealand secondary school students revealed concerning results.
43 'Just over half the students reported that their family ate meals together on 5 or more
44 days in the past week' (Adolescent Health Research Group, 2008, p. 19). Their food
45 occupations were associated with social index. Compared with other students, those
46 from more deprived neighbourhoods were twice as likely to buy their breakfast from
47 takeaway bars or shops rather than eat at home.

1 Occupational science might contribute meaningfully to understanding and changing
2 this social pattern of food occupations in a multiplicity of ways. Two are suggested. A
3 grounded theory approach, gathering in-depth data from families across the social
4 spectrum, could build an understanding of the processes involved in making decisions
5 about meals and meal times. Working with this knowledge, an evidence-based
6 occupational science (Clark, Jackson, & Carlson, 2004) study could be conducted to
7 test the effectiveness of different family-focused, occupation-centred interventions
8 aimed at making family meal times routine, daily events. Clark and her team at the
9 University of Southern California developed and continue to refine the strategies for
10 occupational science evidence-based practice. They advocate using a strategic sequence
11 of different methodologies including a comprehensive literature review, an exploratory
12 interpretive study and a randomized controlled trial to test the efficacy of the carefully
13 designed interventions. Follow-up surveys could be used to determine the ongoing
14 outcomes and cost-effectiveness of the interventions.
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18 ***The community, occupation and health***

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20 Increasingly, communities around the globe are home to culturally diverse peoples as a
21 consequence of migration, refugee resettlement, family reunification and other reasons.
22 Yet, while cultural diversity may advance the health of communities through economic,
23 cultural and spiritual development (UNESCO, 2010), reports of exclusionary attitudes
24 and practices in communities are prevalent (Boat People SOS, 2009). For example, in
25 the United Kingdom, racially motivated incidents are played out on the streets of rural
26 and urban communities (Athwal, Bourne, & Wood, 2010). Research of 660 cases
27 reported during 2009 demonstrated they were typically 'random acts of unprovoked
28 violence, carried out by mainly young white men' (Athwal *et al.*, 2010, p. 6) acting
29 alone or in groups. The attacks varied in nature from 'graffiti on a wall and spoken
30 abuse to the clandestine setting of fires and violent, murderous stabbings' (Athwal
31 *et al.*, 2010, p. 10). Young adults and youth were also highly represented amongst the
32 victims, particularly 'refugees, asylum seekers, migrant workers or overseas students'
33 (Athwal *et al.*, 2010, p. 7). Internationally, disaffected young people, often in areas
34 of high youth unemployment, contribute significantly to community instability
35 (UN, 2010).

36 Thinking of 'victimizing' as an occupation suggests a place for occupational science
37 in attempting to understand and resolve this widespread issue. One methodological
38 approach would be to use phenomenology to understand the community-based
39 experiences of those doing the victimizing and how the occupation fits within the
40 everyday comings and goings of the local community. Such understandings could be
41 used to develop occupationally focused interventions at a community level. However, a
42 local need for inclusive forms of cultural diversity might be best served by truly
43 collaborative, community-based participatory research (Minkler & Wallerstein, 2003).
44 By way of the methodological interplay between research and action, the methods
45 would be aimed at empowering the local community to collectively address young
46 people's participation in victimizing occupations, and in building the community's
47 capacity for creating health-promoting occupations for its own people.

The population, occupation and health

In almost all countries in the world, the proportion of people aged 60 and older is increasing. Older adults currently number over 700 million, or about 11% of the global population. By the middle of this century it is expected that this number will grow to 2 billion, meaning older adults will constitute 22% of all the world's peoples (UN DESA, 2009). Accordingly, promoting a healthful life for its older members is an important matter for most societies (UN Programme on Ageing, 2007). Much of the international research examines the biological, medical and social determinants of older adults' health. However, several large studies suggest participation in occupations may be an important determinant of healthfulness in advanced age (Glass *et al.*, 1999; Hagglom-Kronlof & Sonn, 2005; Menec, 2003).

One current longitudinal, cohort study of older New Zealanders, Maori aged 80–90 years and non-Maori turning 85, offers the hope of new insights into the relationship between occupation and health. Led by Ngaire Kerse at the University of Auckland, the researchers aim to recruit a complete sample of 1200 older adults living within several defined geographic boundaries. As an interdisciplinary project, the study aims to determine what the predictors of 'successful' advanced ageing are, and what the relative importance of health, social, occupational and environmental variables, and cultural practices are in predicting healthy ageing. Comprehensive, face-to-face interviews are being conducted in people's place of residence by local research assistants, trained to implement all the measures. Funding has been secured for gathering follow-up data at 12 months, in 2011, and again at 24 months. The plan is to follow the participants through to end of life. While the interplay of health, social, occupational, environmental and cultural variables in everyday life is complex, longitudinal, cohort methodologies hold the prospect of explaining the role of different occupations and occupational participation in promoting the healthfulness of populations.

Bringing the research conversation together

Good research is being done in the name of occupational science. There is more research within the field that is entirely congruent but not named as occupational science when it comes to publication. The naming is one step easily made in raising the prevalence and visibility of occupational science research. Occupational science growth over its first two decades is predominantly in research using interpretive approaches. While this emphasis does contribute to occupational science being distinguishable for its strengths in the interpretive paradigm, the pattern suggests a pressing need for opening up the range of questions being asked and, therefore, the diversity of research methodologies being used. Greater interdisciplinary collaboration in researching occupation may be one impetus for this to occur (Clark, 2006; Molke *et al.*, 2004). Other disciplines such as population health, human geography, gerontology and neuroscience have a history of raising particular types of questions and building strengths in research methodologies such as epidemiology, cross-sectional studies, prospective cohort studies, retrospective case control studies, randomized controlled trials and process evaluations.

1 The synthesis of knowledge generated from interdisciplinary research collaborations,
2 as is already occurring, will continue to bring fresh ways of asking about occupation,
3 new ways of researching it, and yield yet-to-be-discovered ways of implementing
4 occupation-focused interventions at the level of the individual, the family, the com-
5 munity, and the population. For example, Clark (2006) made a case for policy-directed,
6 strategic collaborations enabling “‘big science’ with real world applications’ (p. 176).
7 At the end of the day, it is the roundedness of the knowledge of occupation that
8 matters. Keeping occupation as the concept that unifies occupational science research
9 will avoid intellectual fragmentation (Clark, 2006).

10 Using the language of science is important. When looking at occupational science
11 research publications underpinned by positivism the research designs are not named as
12 being ‘quantitative’ in nature. In the positivist tradition the study designs are named;
13 such as a pre-test–post-test survey (Frank *et al.*, 2008), a ‘2 x 2 repeated measures
14 design’ (Persch *et al.*, 2009, p. 163), an ‘instrumental case study design’ (Wood,
15 Womack, & Hooper, 2009, p. 339), a ‘prospective cohort study’ (Glass *et al.*, 1999,
16 p. 478), or a ‘randomized controlled trial’ (Clark *et al.*, 1997, p. S74). When the design
17 is named, research methods that contribute to the trustworthiness of the study as a
18 whole are known. Granted, positivism has a long history and the research designs
19 typically align with long-established traditions, but it does mean the foundations for
20 research rigour are rendered more visible and therefore more readily open to critique.
21 The same needs to occur with occupational science research conducted within the
22 interpretive paradigm. Rather than naming studies as being ‘qualitative’ in nature, the
23 methodological approach ought to be named and clearly described, such as Glaserian
24 grounded theory, or Foucauldian discourse analysis or Heideggerian phenomenology;
25 opening the methods up to rigorous application and review.

26 While this chapter has illustrated how diversifying the questions asked will neces-
27 sarily lead to the use of a rich repertoire of research methodologies, the true value of
28 embracing multiple methodologies will only be realized when the relevant philosophy
29 or methodology is rigorously applied from beginning to end. The inception of
30 occupational science as a science already implies the existence of ‘trustworthy methods
31 for the discovery of new truth within its own domain’ (Simpson & Weiner, 1989,
32 p. 649). It is time to more fully claim and demonstrate the ‘science’ in occupational
33 science. The work has begun in earnest; however, there is a long way to go before
34 occupational science is fully living up to its name.

35 Viewing occupation through the different methodological lenses available ought to
36 be like looking through a kaleidoscope. With each methodological turn, different pieces
37 of knowledge will fall into place, allowing some things to be seen and other things to be
38 concealed. Like the pieces of coloured glass in the kaleidoscope, the methodological
39 scope for knowing occupation in its roundedness, its entirety, is colourful and of
40 endless variety. To build a robust science for the betterment of humanity, occupational
41 scientists must continue to define the research agenda within local and global contexts,
42 diversify the research questions being asked, and invest heavily in research excellence
43 using the rich and creative array of possible research methodologies.

44 What seems important is the assumption that we can only ever be on the way to
45 knowing human occupation in its wholeness. ‘A complete understanding can never be
46 fully realized, as human occupation is infinite in nature’ (Molke *et al.*, 2004, p. 277).
47 The task of occupational science, as a science, will never be done. While this may sound

1 daunting, it is this ‘always being on the way to understanding’ nature that delivers
2 occupational scientists over to the excitement of doing occupational science; of
3 pondering deeply and of doing the research. And it is this yearning to grasp occupation,
4 more and more fully in its wholeness, which opens up the possibilities for knowing it. It
5 is the incessant journey towards understanding the roundedness of occupation, in yet-
6 to-be-known ways, which matters to occupational science.

7 The ideas shared in this chapter are but one small part of an evolving, and necessary,
8 critical conversation about occupational science. This thought brings the case for
9 multiple methodologies back to the words of Leunig’s (2001) Mr curly:

10
11 *Once again Vasco, it is not the length of life which is important, it is the shape and*
12 *the spaciousness – for therein lies the potential for a beautiful freedom. It is the*
13 *roundedness of life that matters. A round life is surely a happy life – and dare I say – it*
14 *is a good life. Please consider these reflections as a small picnic of thoughts we may*
15 *share together. (p. 50)*
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