

Landscape, birds and occupation: Towards an ecocritical theory of occupation in Terry Tempest Williams' *Refuge*

景観・鳥・作業

- テリー・テンペスト・ウィリアムス著『鳥と砂漠と湖と』 における作業の環境批評的分析 -

MARK J. HUDSON¹⁾²⁾, MAMI AOYAMA¹⁾

マーク・ハドソン¹⁾²⁾ 青山真美¹⁾

Abstract: Despite extensive empirical evidence that natural environments have positive effects on human health and well-being, the health sciences have been slow to develop ecocritical perspectives on health, disability and well-being. This paper attempts an ecocritical critique of one of the central tenets of occupational therapy the assumption of human exceptionalism whereby the profession's keystone concept of "occupation" is limited to humans. This paper develops a preliminary critique of this position, arguing that the concept of "co-occupation" used in occupational therapy and occupational science be extended from its current focus on occupations shared by two or more *people* to include non-human animals. This proposal is developed through a discussion of a modern classic of American environmental writing, Terry Tempest Williams' *Refuge: An Unnatural History of Family and Place* (1991).

要旨: 作業療法と作業科学は、人間例外主義の立場から発展し、「作業」occupationの所有は人間のみに限定されてきた。本稿では、この視点の批評の第一歩として、作業科学で広く利用されている「共作業」co-occupationという概念を環境批評(ecocriticism)の視点から再検討する。テリー・テンペスト・ウィリアムス著 *Refuge: An Unnatural History of Family and Place* (和訳『鳥と砂漠と湖と』)の分析を通して、「共作業」は、人間だけではなく、人間以外の動物も含むことを提案する。

Key words: Human exceptionalism (人間例外主義), co-occupation (共作業), ecocriticism (環境批評)

Like other health professions, occupational therapy has developed based on a firm belief in human exceptionalism. Occupational therapy's keystone concept of "occupation" everyday activities that affect health, well-being, and the social determinants of health has been strictly policed to exclude non-human animals. This same stance has also been adopted by

occupational science, an academic discipline developed in the late 1980s to provide a base for research and education on "occupation" (Clark et al. 1991; Yerxa et al. 1990; Zemke and Clark 1996a). Occupational science has always developed within a strongly human-centered perspective. Thus, "occupational science is defined as the study of *humans* as occupational

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1) Department of Occupational Therapy, Nishikyushu University
西九州大学リハビリテーション学部作業療法学専攻

2) History Working Group, Center for Ainu and Indigenous Studies, Hokkaido University
北海道大学アイヌ・先住民研究センター 歴史ワーキンググループ

beings” (Clark et al. 1991: 301, emphasis added) and “Individuals are most true to their humanity when engaged in occupation” (Yerxa et al. 1990: 7). For occupational science, the humanity of occupation is connected to its symbolic meanings: “Occupation is a uniquely human enterprise because of the extent of its symbolic vehicle” (Clark et al. 1991: 301). This symbolic focus has led to Fortune’s (1996) suggestion that the presence or absence of symbolism explains the evolutionary transition between animal “proto-occupations” and human “occupations”.

The most important exception to this view of human exceptionalism within occupational therapy and occupational science has come from the research of Wendy Wood on primates. Wood notes (we believe correctly) that, while evolutionary complexity is an important factor in occupational behavior, too strict an application of this as a criterion for occupation would effectively exclude some disabled people: “complex capacities to travel purposively while relying on internal cognitive maps and interpreting subtle physical and social clues are far more intact in healthy chimpanzees than they are in people with dementia” (Wood et al. 2000: 6). Thus, Wood and colleagues (2000: 6) conclude that, “distinguishing non-human from human occupations categorically by degree of complexity seems both species-centric and potentially dehumanizing to some persons.” Ecocritic Timothy Morton notes that we often set the barrier too high in trying to make animals somehow “prove” their cognitive capabilities and defines ethics as “treating others as human beings, even when we’re not sure they are” (Morton 2009).

Wood’s doctoral primate research was funded by a Jane Goodall Fellowship and it is no coincidence that many of her conclusions find ready correlation in the literature on the health and well-being of animals. When we look at this literature, we find something very interesting: zoo biologists and others concerned with the health of animals in captivity use a very similar framework to that held by occupational therapy. Although there seems to be little formal communication between these two fields (with the notable exception of Wood’s work), we can even find articles with titles such as “A digging trough as occupational therapy for

Pacific Walruses in human care” (Kastelein and Wiepkema 1989). There is a huge literature in this area that shows that the well-being of captive animals is usually improved by environmental “enrichments” (Shepherdson et al. 1998). This research and practice in zoo biology would seem to make best sense by utilizing a concept of occupation similar to that employed by occupational therapy for human subjects. However, it is one thing to show that such animal “occupational therapy” enriches the life of a captive animal, quite another to understand what that “occupation” might mean for the animal. This reflects, of course, the difficult philosophical problem of how humans can imagine the life of non-human animals. “What is it like to be a bat?” asked philosopher Thomas Nagel (1974) in a famous essay. This is a problem that requires future thought and research, yet the therapeutic effects of occupation can often be seen without a complete understanding of their meanings, both for a human and for a non-human animal. In other words, we believe it is possible to begin to approach this problem of the human-animal divide in occupational therapy and occupational science without a full understanding of what occupations might “mean” for a particular species or individual.

Logically separate from the question of whether non-human animals have occupations, is the role of animals *in* human occupations and in this paper we attempt a preliminary examination of this problem by looking at “co-occupations”. Occupational therapy and occupational science have almost exclusively focused on individuals and individual occupations. Perhaps the most important way in which this focus on the individual has been extended has been through the concept of “co-occupation”, which was developed in occupational science in the 1990s to analyze occupations that are performed by two or more people (Zemke and Clark 1996b; Pierce 2003, 2009). In this essay, we re-examine the concept of “co-occupation” through an ecocritical analysis of Terry Tempest Williams’ 1991 autobiographical work *Refuge: An Unnatural History of Family and Place* (hereafter abbreviated and cited as *Refuge*). From this analysis, we argue that existing approaches to co-occupation are too narrow in the sense that they are limited to other peo-

ple. It is proposed that animals (birds in the case of *Refuge*) play an important role in many co-occupations and that this important concept in occupational therapy and occupational science thus needs to be extended to include non-human animals.¹

Refuge

Following its publication in 1991, *Refuge* quickly became a classic of American environmental writing and an extract from the book was included in *American Earth*, a recent anthology of American nature writing edited by Bill McKibben (2008). Author Terry Tempest Williams (b. 1955) is a writer, environmental activist, and leading public intellectual in the United States today. Williams worked as curator of education and naturalist-in-residence at the Utah Museum of Natural History in Salt Lake City from 1981 to 1996 and is currently the Annie Clark Tanner Fellow in the Environmental Humanities Graduate Program at the University of Utah.

Refuge is a book that combines two narratives, one dealing with the cancer of Williams' mother and other female relatives and the other describing the bird life of the Great Salt Lake in Utah at a time when the level of water in the lake was rising and thus threatening the ecology of many of the birds. This narrative structure "explicitly equates Williams's mother with the lake and the cancer with the flood" (Dodd 2003: 4), but *Refuge* is a narrative not so much of mourning, as of healing and justice. Williams (*Refuge*, p. 4) confesses that, "Perhaps, I am telling this story in an attempt to heal myself, to confront what I do not know, to create a path for myself with the idea that 'memory is the only way home.'" From an occupational therapy/science perspective, one could say that the author uses the occupations of watching and learning about birds to help her come to terms with the illness and death of her mother and other relatives. The split narrative of *Refuge* is not a way to understand possible causes of cancer as in Richard Powers' 1998 novel *Gain* but reflects the author's personal attempts to come to terms with illness, death and loss.

A final ten-page epilogue in *Refuge*, titled "The clan of one-breasted women", briefly discusses possible links between the cancers in Williams' family and above-ground nuclear testing in Nevada in the 1950s. The high incidence of cancers among the so-called "down-winders" of this nuclear testing is presented as an issue of social justice that is linked to (environmental) justice for the birds of the Great Salt Lake. However, this is not an explicitly political book in its main narratives. The main body of *Refuge* focuses on birds. With the exception of the epilogue, all of the other chapters are named after birds such as "Barn swallows", "Long-billed curlews" and "Snowy plovers". An appendix lists the common and scientific names of 206 birdspecies associated with Great Salt Lake.

Occupation in *Refuge*

The main occupation performed by Terry Tempest Williams in *Refuge* might be described as "bird watching". Although this term is also used by Williams herself (*Refuge*, p. 87), for many readers it may suggest a passive relationship between birds and bird watcher that does not begin to capture the complexity of the actual relationships portrayed in the book. As an occupation, bird watching can be said to exist on a continuum between more active and more passive performances, just as keeping pets can range from keeping big dogs that need walking for over an hour every day through to aquarium fish that are primarily looked at (cf. Langfield and James 2009). The bird watching in *Refuge* is highly active, but it is argued here that even passive performances can involve co-occupation with animals. One example of such "passivity" is Richard Nelson's (1997) description of watching a doe give birth to a fawn, an activity in which the intensity of his sense of wonder is paralleled by his almost total lack of actual physical movement for a long period to avoid frightening the deer.² Watching the doe also required that Nelson's pet dog kept quiet for a similar length of time. The significance of this occupation for Nelson required that the deer *not* see him, yet the same occupation

¹ And perhaps also to post-human lifeforms such as robots and androids, although no attempt will be made to discuss these forms here.

² This description can also be found in McKibben's (2008) anthology *American Earth*.

would not have been possible without the presence of the deer.

For Williams in *Refuge*, what might be called “bird watching” includes a wide range of other of activities including praying to birds (p. 149), protesting the destruction of the birds’ habitats (p. 12-13), dancing (in Mexico) wearing an owl mask (p. 278), relaxing and sleeping next to her husband, Brooke, (p. 150), and (on frequent occasions) reflecting on life and family through watching birds from the position that “I could not separate the Bird Refuge from my family” (p. 40). In these various occupations, birds always play a central role, not just as literary metaphors for occupation, but as necessary *participants* in the occupations. In other words, these occupations could not have been performed in the way that they were without the participation of the birds. The text of *Refuge* leaves no doubt as to the importance of this mutual relationship; the narrative structure of the book insists on this relationship with its relentless inclusions of birds, an inclusion that goes beyond mere stylistic juxtaposition to form a central and necessary part of all occupations. Birds and nature are a part of everyday life and thus naturally a part of everyday occupations.

Occupation and Place

In a radio interview, Williams has stated that, “For me, it begins and ends with landscape” (Tippett and Williams 2011). In *Refuge*, the importance of links with the landscape is expressed in a conversation with a Kenyan friend who explains “My people believe if you are close to the Earth, you are close to people.”

“Because we have forgotten our kinship with the land,” she continued, “our kinship with each other has become pale. We shy away from accountability and involvement. We choose to be occupied, which is quite different from being engaged.” [*Refuge*, p. 137]

The difference between “occupied” and “engaged” here is one that we will all recognize, although occupational therapists and occupational scientists would probably use the former for activities that are truly en-

gaged and engaging. Throughout *Refuge*, Williams emphasizes her connections to the land and to the birds and animals that inhabit that land. “The birds and I share a natural history,” she explains. “It is a matter of rootedness, of living inside a place for so long that the mind and imagination fuse” (*Refuge*, p. 21). The long list of birds at the end of *Refuge* finds a parallel in a more (extra) ordinary list in Williams’ 2001 work *Red: Passion and Patience in the Desert*. In a chapter titled “America’s Redrock Wilderness”, Williams (2001: 61) writes, “Wilderness is not a belief. It is a place. And in Utah, we know these places by name” - before continuing to list almost seven pages of place names from Little Goose Creek to Moon-Eyed Horse Canyon. Like the birds, these places are not just names but parts of life and a living landscape.

Sometimes, the connection to nature in *Refuge* seems literary, perhaps even contrived, as when rain, “[i]n a peculiar sort of way, ... gave us permission to cry” (*Refuge*, p. 28). Other times, the link seems overly romantic, or what one critical voice has called “New Age” (Bush 1995): “I am desert. I am mountains. I am Great Salt Lake” (*Refuge*, p. 29). Most times, however, the connection reads as intimate, rooted, an honest expression of living and being in place. In the midst of her family grief, Williams reminds us that, “There are other lives to consider: avocets, stilts, and stones” (*Refuge*, p. 29). Being linked to these other lives is what is important for the author and what gives her occupations meaning. This connection is also expressed by Williams’ mother, who, in a letter included in the book notes that, “More and more, I am realizing the natural world is my connection to myself” (*Refuge*, p. 86). The *lack* of such links conversely implies deprivation to the author: scooping up pondweed, “Microscopic animals and a myriad of larvae drained from my hands. Within seconds, the marsh in microcosm slipped through my fingers. I was not prepared for the loneliness that followed” (*Refuge*, p. 41).

Williams’ view of the landscape in *Refuge* is a highly spiritual one. Growing up in the Mormon tradition, the author explains that she “learned at an early age that God can be found wherever you are, *espe-*

cially outside. Family worship was not just relegated to Sunday in a chapel” (*Refuge*, p. 14, emphasis added). At the same time, as many critics have noted already, the book presents a critical view of aspects of the Mormon tradition (Chandler 2003). *Refuge* is also a highly political view of landscape: the American West and the desert are, for Williams, not simply places where wilderness brings proximity to the spiritual, but rather “an irrevocably social landscape, transformed by militarism, urbanization, the interstate highway, epidemic vandalism, mass tourism, and the extractive industries’ boom-and-bust cycles. Even in the “last wild places,” the remote ranges and lost box canyons, the Pentagon’s jets are always overhead” (Davis 2002: 39). This quote from Mike Davis’ book *Dead Cities* is not specifically about Williams’ work but sums up her critical perspective rather well and the image of Pentagon jets “always overhead” finds its echo in Williams’ essay *All That is Hidden* when, visiting a remote desert wildlife refuge,

All at once, a high-pitched whining shatters us, flashes over our shoulders, threatens to blow us off the ridge. Two jets scream by. Within seconds, one, two, three bombs drop. The explosions are deafening; the desert is in flame. [Williams 1994: 122]

Discussion: Expanding Co-Occupation

Despite traditionally being a female-centered profession, occupational therapy can be said to have retained very “masculine” views of the control and domination of the environment a “view of the human as one who acts on the environment” (Yerxa et al. 1990: 10). Terry Tempest Williams’ ecofeminist writings suggest a very different way of relating to nature through the intimacies of the body. Nothing we do as humans is done without a myriad of other life forms that participate in or support our occupations in numerous, complex ways, from microscopic organisms in our eyebrows to plants that clean the air we breathe to ants that eat decaying vegetation. In an essay on Williams’ 1994 work *An Unspoken Hunger*, Mary Newell (2003: 28) writes,

The exploitation of the natural world, with no concern for sustainability, has been justified by dichotomous epistemologies in which mind, male, and human are valued while body, female, and nature become devalued “others”. In dichotomous models, position is relative to an empowered center. Ecological approaches are, in contrast, relational; they view the natural world as an interlinked, mutually sustaining web of life, in which all animate forms have subjectivity and agency.

If we adopt such a relational or “ecological” approach to occupation, then it seems natural to argue that non-human animals form an important element in most, if not all, human occupations.

Critics will be quick to point out that such organisms are not necessarily consciously participating in the same occupation as humans and that any meanings contained in the occupations will be quite different for humans and non-humans. A specific objection here might be that non-human occupations cannot “be named in the lexicon of the culture”, to cite a part of the widely-used definition of occupation proposed by Yerxa et al. (1990: 5). However, while human language obviously differs in fundamental ways from that of other animals, it is nevertheless difficult to make a clear demarcation with respect to naming occupations. Anyone who keeps a dog as a pet will be aware that the dog responds immediately to linguistic signifiers such as “go for a walk”. Whatever meanings this has for the dog is difficult for humans to discern, but there is no doubt that it does have very important meanings for the dog. In fact, it is hard to see how Yerxa et al.’s classic definition of occupation could not be rephrased as “specific ‘chunks’ of activity within the ongoing stream of pet dog behavior which are named in the lexicon of the culture” (cf. Yerxa et al. 1990: 5). Or, to rephrase another statement made by the same authors and already cited here above, “Pet dogs are most true to their dogness when engaged in occupation” (cf. Yerxa et al. 1990: 7). Other animals, of course, have very different systems of communication but there are

few cases where we know enough about those communicative systems to be able to say categorically that they contain no way of “naming” occupation. Whales are a good example here: we are only beginning to learn about the complexities of codas (stereotyped patterns of clicks) produced by whales and what they might mean for whale communication (e.g., Antunes et al. 2011). Beyond such empirical questions, it should also be mentioned that human discourse with/about animals is also profoundly affected by cultural and rhetorical perspectives (Milstein 2007).

Animals in co-occupation

How might birds and other non-human animals actually be included in models of co-occupation that have so far been proposed in occupational science? Three main sub-classifications of co-occupation have been suggested by Zemke and Clark (1996b), by Pierce (2003), and by Pickens & Pizur-Barnekow (2009) (Table 1). All of these authors divide the broad concept of co-occupation into three stages: (1) “parallel” or “solitary” occupations where there may be “shared physicality” with other people but occupations are essentially individualized; (2) “shared” occupations that require “give-and-take”, “interaction” or “reciprocal

emotional responses”; and (3) full “co-occupations” which require agency or “shared intentionality” by all actors. As noted in the right column of Table 1, these existing classifications and definitions are all based on human actors yet their wording makes it difficult to exclude non-human animals in almost all cases, except for the largely unknown and perhaps unknowable category of “shared intentionality”. This last area opens up complex philosophical issues that are beyond the scope of this essay. But we wish to at least mention the existence of arguments that note that we, as humans, require new approaches or what Donna Haraway calls “protocols” to open up “the possibility of mutual response” with non-human animals (Haraway 2008: 22). It seems probable that the meanings of any “occupation” for animals are completely different to those experienced by humans, yet humans themselves cannot be assumed to assign the same meanings to occupation. If an occupation could not exist without the presence or participation of a non-human organism, then we have to include that organism in the co-occupation.³

Table 1. Sub-classifications of co-occupation and some possible connections with non-human animals.

Zemke & Clark (1996b)	Pierce (2003)	Pickens & Pizur-Barnekow (2009)	Possible connections with non-human animals
Parallel occupations: participants are individually involved in their own occupations while others nearby are carrying out similar or related ones.	Solitary occupations: An occupation that is perceived as being completely uninvolved with others.	Shared physicality: physical presence at the same occupation.	Humans may perceive themselves engaged in solitary occupations , but animals are always present in parallel occupations and in shared physicality .
Shared occupations: carried out individually but enriched by give-and-take between people.	Shared occupations: Interactive occupations that fall between co-occupations and solitary occupations. Examples include sharing a dinner or watching a football game with friends.	Shared emotionality: requires reciprocal emotional responses.	Can be applied to animals in all cases.
Co-occupations: the most deeply social occupations, which require that all people engaged in the occupation must be seen as actors.	Co-occupations: “the most highly interactive types of occupation, in which the occupational experiences of the individuals involved simply could not occur without the interactive responses of the other person or persons with whom the occupations are being experienced”	Shared intentionality: requires joint goal setting and role reversal.	Giving agency to animals makes them potential participants in both types of co-occupation . Presence of shared intentionality is unknown.

³ As we finished writing the first draft of this paragraph, a heron flew overhead in the night sky, screeching its approval.

Can an ecocritical analysis of occupation have clinical implications?

Our discussion in this paper has been primarily theoretical and any possible clinical implications of the position advocated here will require further thought and analysis. Yet, we do not doubt that such clinical implications exist. A mutualistic view of human occupation as embedded in nature can be enormously therapeutic a view that is surely one of the main conclusions of Williams' *Refuge*.⁴ One interesting recent parallel here in the occupational therapy literature is provided by a study of pet fish ownership by Langfield and James (2009). These authors found that "owning fish can provide similar benefits to health and wellbeing that other more interactive pets have been found to provide" (Langfield and James 2009: 355). For the subjects of this study, "The environment that the fish lived in was considered to be as important as the pets themselves" (Langfield and James 2009: 353). As a result, "As an occupation, meaning was found in performing activities for fish care, including the creation of a tank environment that accommodates the fish and provides atmosphere to the owner's home" (Langfield and James 2009: 355). The findings of this study are very similar to our ecocritical reading of *Refuge*, a work in which humans and non-human animals both form part of an inter-connected living environment. Care for that living environment and its inhabitants cannot be separated from care for the human.

Conclusions

This paper has used an ecocritical reading of Terry Tempest Williams' work *Refuge* to argue for a closer connection between humans, birds and animals, and landscape in our everyday occupations. The concept of "co-occupation" is one that has been used in occupational therapy and occupational science to examine how individual human occupations may relate to a more complex, shared social whole. Here we have taken this argument one step further and proposed that

there are few grounds to limit this idea of co-occupation to other humans; we suggest that non-human animals also play an important role in many co-occupations. Doris Pierce, the originator of the concept of co-occupation, has written that co-occupations occur when "the occupational experiences of the individual involved simply could not occur without the interactive responses of the other person or persons with whom the occupations are being experienced" (Pierce 2003: 199). Given this and similar definitions, how can we separate author Williams' occupations from the many birds that fly in and out of *Refuge*?

This essay does *not* propose that there are no differences between the occupations or occupational experiences of humans and birds or other animals. As Pierce and other occupational scientists have emphasized, co-occupation must be seen as a continuum of forms, an observation that just as clearly applies to co-occupations involving non-human as to human organisms. For example, the copious quantities of corn (maize) in contemporary diets and processed goods in the Global North does not mean that our occupations are emotionally shared with the plant *Zea mays*, although the current disturbing level of physical "give-and-take" between *Zea* and *Homo* (Pollan 2006: 18-31) leaves no doubt about "shared physicality" for most human occupations. The ecocritical approach adopted here has attempted to open a door to questions about how human occupations are performed *in nature*. Nature's responses to these questions may surprise us into new ways of thinking about ourselves.

Terry Tempest Williams herself has perhaps the most interesting example of how human occupations are linked to nature. When writing, she keeps a lighted candle and a bowl of water in her workplace. Even if she is not writing anything, there is still evaporation something is happening in the room. "Most of the day I am doing nothing," Williams confesses of her writing process. "I am waiting. Writing is a natural process, like evaporation, we might not see it going on but it is

⁴ This view of human proximity to nature might, however, also be very disturbing, a possibility which has been eloquently developed by Timothy Morton in his writings on "Dark Ecology" (Morton 2007).

⁵ Cited in "Luncheon with Terry Tempest Williams" by Ian Isherwood. Dartmouth College Graduate News Archives. Electronic document, <http://graduate.dartmouth.edu/news/archives/twilliams.html>, accessed October 3, 2011.

happening.”⁵

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References

- Antunes R, Schulz T, Gero S, Whitehead H, Gordon J, Rendell L (2011) Individually distinctive acoustic features in sperm whale codas. *Animal Behaviour* 81: 723-730.
- Bush LL (1995) Terry Tempest Williams's *Refuge*: Sentimentality and separation. *Dialogue: A Journal of Mormon Thought* 28 (3): 147-160.
- Chandler KR (2003) Potsherds and petroglyphs: Unearthing Latter-Day Saint sources for Williams's environmental vision. In: Chandler KR, Goldthwaite MA (eds), *Surveying the Literary Landscape of Terry Tempest Williams: New Critical Essays*. Salt Lake City: University of Utah Press, 195-210.
- Clark FA, Parham D, Carlson ME, Frank G, Jackson J, Pierce D, Wolfe RJ, Zemke R (1991) Occupational science: Academic innovation in the service of occupational therapy's future. *American Journal of Occupational Therapy* 45(4): 300-310.
- Dodd E (2003) Beyond the blithe air: Williams's postnuclear transcendentalism. In: Chandler KR, Goldthwaite MA (eds), *Surveying the Literary Landscape of Terry Tempest Williams: New Critical Essays*. Salt Lake City: University of Utah Press, 3-13.
- Fortune T (1996) The proto-occupation / occupation interface: An exploration of human occupation and its symbolic origins. *Journal of Occupational Science* 3(3): 86-92.
- Haraway DJ (2008) *When Species Meet*. Minneapolis: University of Minnesota Press.
- Kastelein RA, Wiepkema PR (1989) A digging trough as occupational therapy for Pacific Walrus (*Odobenus rosmarus divergens*) in human care. *Aquatic Mammals* 15(1): 9-17.
- Langfield J & James C (2009) Fishy tales: experiences of the occupation of keeping fish as pets. *British Journal of Occupational Therapy* 72(8): 349-356.
- McKibben B (Ed.) 2008. *American Earth: Environmental Writing Since Thoreau*. New York: Library of America.
- Milstein T (2007) Human communication's effects on relationships with animals. In: Bekoff M (ed.), *Encyclopedia of Human-Animal Relationships: A Global Exploration of our Connections with Animals, Volume 3*. Westport CT, Greenwood Press, 1044-1054.
- Morton T (2007) *Ecology Without Nature: Rethinking Environmental Aesthetics*. Cambridge MA: Harvard University Press.
- Morton T (2009) *Frankenstein: Monsters R Us 2*. University of California Davis lecture ENL130, June 2, 2009. Available as iTunes podcast.
- Nagel T (1974) What is it like to be a bat? *The Philosophical Review* 83(4): 435-450.
- Nelson, R (1997) *Heart and Blood: Living with Deer in America*. New York: Alfred A. Knopf.
- Newell M (2003) Embodied mutuality: Reconnection to environment and self in *An Unspoken Hunger*. In: Chandler KR, Goldthwaite MA (eds), *Surveying the Literary Landscape of Terry Tempest Williams: New Critical Essays*. Salt Lake City, University of Utah Press, 27-46.
- Pickens ND, Pizur-Barnekow K (2009) Guest editorial. *Journal of Occupational Science* 16(3): 138-139.
- Pierce DE (2003) *Occupation by Design: Building Therapeutic Power*. Philadelphia: F. A. Davis.
- Pierce DE (2009) Co-occupation: The challenges of defining concepts original to occupational science. *Journal of Occupational Science* 16(3): 203-207.
- Pollan M (2006) *The Omnivore's Dilemma: A Natural History of Four Meals*. New York: Penguin.
- Powers R (1998) *Gain*. New York: Farrar, Straus & Giroux.
- Shepherdson DJ, Mellen JD, Hutchins M (Eds.) (1998) *Second Nature: Environmental Enrichment for Captive Animals*. Washington DC: Smithsonian Institution Press.
- Tippett K, Williams TT (2011) The Vitality of the Struggle. Krista Tippett on Being. American Public Media radio interview. Podcast.
- Williams TT (1991) *Refuge: An Unnatural History of Family and Place*. New York: Vintage. (石井倫代訳 (1995) 鳥と砂漠と湖と . 東京 , 宝島社).
- Williams TT (1994) All that is hidden. In *An Unspoken Hunger: Stories from the Field*. New York: Pantheon, 115-124.
- Williams TT (2001) *Red: Passion and Patience in the Desert*. New York: Pantheon.
- Wood W, Towers L, Malchow J (2000) Environment, time-use, and adaptedness in Prosimians: Implications for discerning behavior that is occupational in nature. *Journal of Occupational Science* 7(1): 5-18.
- Yerxa EJ, Clark F, Frank G, Jackson J, Parham D, Pierce D, Stein C, Zemke R (1990) An introduction to occupational science, a foundation for occupational therapy in the 21st century. *Occupational Therapy in Health Care* 6(4): 1-17.
- Zemke R, Clark F (Eds.) (1996a) *Occupational Science: The Evolving Discipline*. Philadelphia, FA Davis.
- Zemke R, Clark F (1996b) Co-occupations of mothers and children. In: Zemke R, Clark F (eds.), *Occupational Science: The Evolving Discipline*. Philadelphia: FA Davis, 213-215.