CHAPTER 4

WRITING AND GLOBAL TRANSFER NARRATIVES: SITUATING THE KNOWLEDGE TRANSFORMATION CONVERSATION

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In their decades of intersecting and co-evolving histories, writing studies, composition, and composition and rhetoric have experienced a series of phases. Each phase produces its master narrative, its story attempting to account for everything that matters to the field. Some of these phases become significant "turns" with permanent paradigm-altering effects; others are woven into our ongoing history as insightful periods that are complemented over time with additional research, new influences, and problematizing of perspectives. It is difficult, in a given moment, to know whether we are seeing a phase or a turn; years later, the history clarifies itself.

The US discussion about writing knowledge transfer is a powerful and promising current phase in our thinking. It appears to be a frame for research and pedagogy that can help us account for and understand how students learn to write and how they appropriate usable knowledge about writing, as well as how teachers can best enable and support that learning. But as with all new phases, there is more to the story. This chapter is designed to complement, extend, and in some ways challenge our existing US conversations about transfer. It is time to contribute back to the broader cross-disciplinary and international research about transfer that composition has recently picked up, and to see our US writing studies discussions in light of that broader research.

As Moore suggests in her 2012 article mapping the current US transfer writing research, "The map of writing-related transfer research has vast areas of uncharted territory" ("Adding Detail," para. 1). This chapter fills in a bit of that uncharted territory, adding to the possible theoretical/conceptual frames provided by many scholars, including those who attended the three-year Elon University Research Seminar on Critical Transitions: Writing and the Question of Transfer. It does so by drawing from additional disciplines and traditions, as recommended in the *Elon Statement on Writing Transfer*, a document that also

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calls our attention to the diversity of meanings in play under the "transfer" umbrella and indicates specifically that the work of naming and understanding the facets of transfer is far from complete. The chapter will suggest that those other traditions give us reasons to rethink transfer, as a term and as an operationalized concept, and offer new ground in two key ways: (1) by critiquing US transfer discussions with a European lens and (2) by exploring uses of the term *transfer* from diverse disciplinary traditions and domains outside of writing studies. I hope to convince readers that the rich diversity of European scholarship about transfer, as well as the intriguing alternative domains of research that focus on transfer, can be useful to growing our understanding, opening up our options, taking us further, sharpening our place, and delineating our unique contributions. In exchange, our focus on transfer in university student writing can contribute to that global and cross-disciplinary conversation, which is complicated, messy, dialogic, and ongoing—a Burkean parlor of global proportions that we are *joining*, not initiating.

I have argued elsewhere (Donahue, 2008; Horner, NeCamp & Donahue, 2011) that we must de-center ourselves in the global field of writing studies if we do seek growth in the context of the international landscape. The transfer phase in US writing studies opens up the opportunity to de-center and re-calibrate in both global and cross-disciplinary contexts.[1] In so doing, composition scholars might determine that transfer is useful as a term that sparks conversation, but its multivalence and diversity and its metaphoric limitations might suggest it is not a long-term solution, but a term of passage toward more complex approaches. One of the limitations of master narratives is that, by their nature, they resist problematizing information. Allowing "transfer" to play the role of overarching term in a master narrative about learning might prevent growth in understanding the phenomenon at hand. There have been arguments for maintaining focus on the single term in order to position the field more powerfully in the disciplines and in the more public and political discussions of writing instruction and learning. But words matter, in our field of words, and positioning with reference to other disciplines is more likely to be strengthened by the depth of our embrace of complexity.

One additional question the writing knowledge transfer discussion provokes is about writing knowledge itself. What kind of knowledge or knowing is writing? What is writing? That is fortunately a question we share with scholars from contexts outside the US and outside writing studies. This chapter, then, brings forward the many ongoing explorations of the history and currency of transfer in US narratives, global scholarship, and cross-disciplinary research, in relation to our notions of language and of writing—writing knowledge, writing knowing, and troublesome knowledge. It argues that we must connect what we know

of language acquisition and language functions to our discussions and debates about writing, writing knowledge, and notions of knowledge transformation.

THE TRANSFER DISCUSSION: SOME US AND EUROPEAN PERSPECTIVES

Discussions of and research about writing knowledge transfer have fairly recently taken center stage in writing research and teaching in the US. Much of the recent US work has explored whether some kind of writing knowledge (know-how, process knowledge, etc.) is serving in some way, or not, across linear, lateral, or recursive contexts. More recent writing studies work has considered the dispositions of students in the transfer equation. The US constructs of transfer to which this section responds are detailed in many contributions in the volume.[2] Several of the points about transfer referenced in this section are also covered in the *Elon Statement on Writing Transfer* (2015; Appendix A) that anchors this volume, and in particular the section "Working Principles" (p. 4–5).

Just briefly: as Moore (2012), Donahue (2012), and others have noted, while the notion of transfer has been developed in various educational domains, in both Europe and the United States and as early as the 1920s, its presence in studies about writing in higher education is generally newer. The term's origin is from the Greek "to transport oneself," evoking the role of one's self and autonomy mentioned earlier. Transfer has both simple and complex definitions. Young, Tuomi-Gröhn, and Engeström (2003) suggest that basic transfer is survival activity, and we adapt to new demands without meta-knowledge. But educational settings are not basic life settings. Perkins and Salomon concur, suggesting that "the entire educational enterprise of formal education depends on transfer" (2007, p. 1) as a conscious activity. Scholars range in their thinking, from the idea that transfer is always occurring (Perrenoud, 1999a) to the concept that transfer is impossible and knowledge is always recreated (Lave, 1988). Transfer has been thought to be, variously, in the individual who carries knowledge, in the context that enables the knowledge to be used and transformed, and in the moment of transformation when the individual interacts with the context.

Moore (2012) notes that US work in progress is focusing on several aspects of writing knowledge transformation. Drawing on writing studies' interest in the way transfer has been conceptualized and categorized, she highlights the near/far and high/low transfer forms, foregrounds Beach's (2003) *consequential transitions*, and connects transfer work to activity theory and genre theory. She points out that longitudinal studies have, to date, been some of the most productive research sites for learning about transfer, even though they were not al-

ways designed to study that transfer. Out of this work has developed the earlier-mentioned *Elon Statement* (2015; Appendix A), a recent conference about the question of transfer, and a series of research projects, many featured in this collection. This research includes classroom to workplace transitions (with roots, of course, in the earliest work on this subject—see Paré, Dias & Farr, 2000; Tuomi-Gröhn & Engeström, 2003); students' personal connections, dispositions, and motivations linked to transfer; links across curricular, extracurricular, and personal writing; meta-cognition and effective (or not) reflection; social identity and transfer (Wardle, Roozen & Casillas, 2013); transfer from first-year composition to writing in the disciplines; multilingual students and transfer; and student expectations and transfer.

The writing transfer discussion has drawn, to date, from some scholarship outside of the US—indeed, two central figures in launching the current discussion, Engeström and Tuomi-Gröhn, are Finnish, and their initial work was accomplished with European Cooperation in Science and Technology (COST) funding and European Association for Research on Learning and Instruction (EARLI) sponsorship in the late 1990s—but on the whole, the US discussion has remained US-centric. This might partly be because US scholars often claim that first-year composition, the site of a fair amount of the transfer research, is unique to the US—and that is perhaps more or less accurate[3]—but we have also tended to equate first-year composition with writing more broadly, and based on this the field has made many tenuous claims about the state of writing research and instruction around the world. This section will suggest that in terms of the transfer discussion, US writing studies is the newcomer. Indeed, the European scholarship was already very active in the 1990s.

In this section, I will review some of the research about what is, in US discussions, frequently called transfer, from European perspectives. I will suggest complements or alternatives to some of the principles, offering European perspectives that in many cases predate the US discussions. The chapter is certainly not a comprehensive overview of work in other cultural and disciplinary domains. For example, many of the sources I reference are French, not world-wide. But I believe they are indicators: If this much work has been done in France, it is highly likely that similar scholarship has been produced in many other countries and languages; certainly we have seen this work in Europe more generally.

In 1999, Swiss scholar Perrenoud was already pointing out that "a good part of what students assimilate in school is only useable in the same context in which they learned it; . . . in another context, students act as though they had learned nothing—although we know that is not the case" (1999b, p. 1).[4] This is undoubtedly familiar-sounding; many of us have experienced the awkward moment when a colleague teaching a class following ours in the curriculum laments

that students seem to know nothing of citation, or organization, or syntax. Teachers, Perrenoud notes, are not prepared to address this issue: "Should they create 'transfer situations'? Focus on decontextualizing and re-contextualizing knowledge? Develop intentional transfer, a favorable metacognitive stance, a culture of transfer?" (1999b, p. 2).

Samson outlines several cognitive factors that directly affect the way the transfer he studied might work: "Our cognitive structure is constituted, from birth on, of knowledge acquired and integrated into existing knowledge. This knowledge creates the mental representations of organized and integrated declarative, procedural, or conditional knowledge that serves as a tool for interpreting reality" (2002, p. 2). In order to facilitate this kind of transformation, learners need the tools for being aware of what they know, categorizing knowledge usefully, identifying the meaningfulness of what is being learned, and reusing it in other learning contexts and in contexts outside of learning (Samson, 2002). In this realm of empirical cognitive research, Doly (2002) further suggests that the learner has to be able to activate metacognitive knowledge intentionally, at the necessary moment; has to be independently carried out by the student, though the teacher often needs to prompt it; and has to, as Cauzinille-Marmèche says, "be able to elaborate specific solutions at the abstract level" (as cited in Doly, 2002, *Transfert et Métacognition* section). In addition, Tardif and Meirieu (1996) insist on the moves of decontextualization and re-contextualization as both essential to knowledge transformation: the work of *uncoupling* knowledge from its initial context in order to reinvest it in a different context.

While it has not been called transfer, parallel work in other disciplines focused on cognitive schema research shares some of the same questions and answers them differently. Schema theories posit that new information is "learned and interpreted in terms of relevant pre-existing schemata" (Haskell, 2000, p. 82). Schema theory from research about writing offers another way to think about what might enable transfer, transformation, and expansive learning. Cognitive research clearly demonstrates the importance of understanding how working memory and long-term memory function in writing development, in novice and expert functions, in addressing new writing challenges, etc. (see for example Foertsch, 1995). This aspect of development, often explored in terms of linguistic development, should directly inform our studies of writing knowledge transformation. For example: What kind of knowing (about writing) is held in working memory long-term (like schemas)?

The cognitive basis for learning writing has evolved via attention to situated cognition. Bransford et al.'s (1999) more general summary reminds us of the situated cognition model that is at the heart of so much writing studies work in both the US and Europe. Lave's (1988) report about Brazilian street children's

math skills and grocers' math abilities in context, as compared to their performance in test situations, is a powerful reminder that a competence is always situated. In addition, scholars have been able to establish that a new context can have as important a role as the previous one in affording transformative reuse of knowledge. Extensive research has suggested that experts and novices function differently when entering new contexts, but we can also establish that those expert-novice roles are constantly in flux. The communities of practice model (Lave, 1991; Lave & Wenger, 1991) that has become more widespread in writing research supports that version of dynamic flux, depicting any participant entering, working through, and perhaps exiting a community as sometimes novice, sometimes expert, and sometimes in-between, depending on the activity, the stance, and so on. This seems to suggest that more fixed models such as the discourse community might not fully account for individual roles and layers of knowledge, as well as for the fluidity of community boundaries.

Samson (2002) describes a continuum, from application (using what is learned in a new, but similar context) to generalization (using what is learned in a different context). He suggests that transfer should be the term only when the knowledge is reused in an entirely new context. Application is thus the most superficial move (Desilets, 1997) and the least likely to transform across disciplines because it is so narrow. The more knowledge is utilitarian, in Samson's view, the less it is transformable; usefulness takes on a new meaning, challenging the applied versions of higher education far more than the liberal arts ones.

A context that offers affordances for transformation is more likely to enable students to adapt and negotiate effectively. Careful construction of a course, to scaffold from explicit teaching of how to transfer toward student-driven transformative moves, could support this (Samson, 2002). The teacher's responsibility is to "construct learning situations that enable students to understand the knowledge (or know-how or way of being) but to be able to use it long-term and autonomously" (Meirieu, 1994, p. 1). The moves of the student writer as appropriation or material ownership figure into the autonomy that Meirieu and Develay (1996) cite. Astolfi notes that transfer is above all an attitude, an awareness of transversal knowledge, based on accepting "the principle that what's learned will be useful for the rest of [a learner's] life" (2002, p. 9). Meirieu suggests that this autonomy must include self-sponsored use, at the learner's initiative (1994, p. 2).

There is strong emphasis in this French educational research on autonomy as a key aspect of successful, re-usable, transferrable learning. The learner needs to be able to use learned knowledge autonomously, not connected to its initial context, and the appropriation of knowledge that autonomy entails demands an awareness—an attitude of acceptance by the learner—about the transferability of what is learned (Astolfi, 2002; Meirieu & Develay, 1996). Autonomy is what

enables and is enabled by decontextualization. Perkins has also emphasized that the learner's stance has tremendous importance: Teachers can organize experiences, but students engage with those experiences through their own interests, dispositions, and skills (2006, p. 36). They might take a deep or surface approach; they might be strategic or unsystematic in their learning (Perkins, 2006, p. 36). The same context can be ritualized routine for some students and genuine inquiry for others (Perkins, 2006, p. 42).

The work on transformation in general has been applied to writing studies in several ways. Scholars differentiate between the more automatized or habitual phenomenon of transfer that, after repeated practice, may occur even without reflection and in everyday settings, and the meta-reflective form of transfer that decontextualizes what was learned (Meirieu & Develay, 1996; Salomon & Perkins, 1989) so that it might take new shapes in new contexts. As noted in this volume's Introduction and Glossary, low-road transfer draws on processes that are "automatic, stimulus-controlled, and extensively practiced" (Salomon & Perkins, 1989, p. 124). High-road transfer involves "mindful [non-automatic] deliberate processes that decontextualize the cognitive elements which are candidates for transfer" (Salomon & Perkins, 1989, p. 124). While we might assume that high-road is somehow better than low-road, without the "socialization, acculturation, and experience-based cognitive development, resulting in the acquisition of habitual behavior patterns, response tendencies, personality traits, cognitive strategies and styles" (Salomon & Perkins, 1989, p. 122) of low-road work, learners would be at a loss. What seems clear is that there is a role for automated knowledge and for transformative knowledge; indeed, one area worth exploring might be the process by which what begins as transformative knowledge can become automated.

Except in some models of first-year writing instruction, on the whole, US conversations focus on a goal of assimilation or integration. As US strands of writing studies become increasingly aware of both international and translingual research, this question becomes more pressing. While more US scholars are linking the transfer discussion to the existing research about dispositions, self-efficacy, and student writers' values, and the research model allows for exploration of resistance, negotiation, etc., the *pedagogical* model remains focused in most cases on optimizing integration. The research about students' work sometimes explores resistances, but few tansfer scholars are arguing that the job of writing teachers should be to *foster* resistance, and the transfer models in play to date have similarly not been focused on reuse, adaptation, transformation, and repurposing of knowledge in order to resist educational influences, reshape the landscape, and so on. Nowacek emphasizes, for example, students as agents of integration (2011, p. 38)—agents, yes, but agents of *integration.* Troublesome

knowledge and boundary-crossing disrupt integration, in some ways, but the implication in the scholarship is that the disruption is useful insofar as it can enable further integration over time.

The "communities of practice" model suggests negotiation and resistance are both omnipresent and productive. E. Wenger-Trayner and B. Wenger-Trayner note that "learning is not merely the acquisition of knowledge. It is the becoming of a person who inhabits the landscape with an identity whose dynamic construction reflects the trajectory through that landscape" (2014, p. 8), describing the landscape itself as a landscape of practice made up of the multiple and complex communities of practice into and through which we move (p. 4). They suggest, however, that the modes of identification we use to find ourselves in these landscapes include engagement, imagination, and alignment. None of these, even though they suggest that alignment is a two-way and fluid dynamic process (Wenger-Trayner, E. & Wenger-Trayner, B., 2014, p. 10), is an active encouragement of resistance or strong negotiation. Within students' texts we can find, on the other hand, moves of quite active resistance and negotiation (see Bartholomae, 1986; Ivanič, 1998; Lillis, 2001; Scott, 2013)—including in texts that are deemed successful in school settings (Donahue, 2004, 2008). The idea that resistance or negotiation might be an essential goal is deeply developed in fields such as "ac lits" (academic literacies) in the U.K. (Street et al., 2009). European scholarship has included a focus on the importance of power relations in knowledge transformation (Hilaricus, 2011). The actors are not seen as all on equal footing (though the communities of practice model offers a way to see an individual's footing as also dynamic, in flux, rather than in a static novice or expert state).

The effects of boundary-crossing or disruption have been shown to be important to knowledge transformation. Pushing learners into "far" contexts and situations in which boundaries are unclear (interdisciplinary work, for example, or liminal situations such as the move from high school to college) and the usual worldview is disrupted appears to foster transformation of knowledge, though it is not yet clear at what degree this is productive, and likely different for different learners (see Vygotsky, 2012).

Driscoll and Wells (2012) argue that students' individual backgrounds and dispositions are a key and understudied factor in writing knowledge transfer, based on their studies of first-year writers in the term after they completed the course and writers making the transition from high school to college. This complements general writing research that has explored in detail the relationship between individual students and writing worlds (U.K. research has developed this in particular, though not exclusively; see Delcambre, 2001; Guibert, 2004; Ivanič, 1998; Lillis, 2001).

TERMINOLOGY

As has become evident in the development of this chapter, and as is evident in other chapters in this volume, different—and multiple—terms are in play for the transformative reuse we are trying to get at, each with its own particular contribution. As we map some of the uncharted territory Moore mentions, the *Elon Statement* encourages us to "explicitly reconcile new terms—and new usage of existing terms—with the scholarship's existing vocabulary" (2015, p. 1; Appendix A). The list of terms developed by some scholars as described in the *Elon Statement*, including transfer, generalization, consequential transition, remix or repurposing, and integration, is a list that this section builds on and from. The multiple universes of meaning and the meaning-making that happens with each new use is generative. Additional terms and concepts from European scholarship support the value of complexifying our terminology rather than moving toward a unified narrative and cementing a single term. Writing knowledge might be different enough from other kinds of disciplinary knowledge to make it important to maintain diversity. Words organize thought, Perrenoud reminds us, and "the metaphor of 'transfer' evokes no transformation, only movement, a kind of 'trip'" (1999b, p. 5). He questions the spatiality of the transfer metaphor, likening it to the way we think of using a flash drive to transfer information from one computer to another, rather than focusing on the "cognitive mechanisms underlying the *reinvestment* of knowledge" (Perrenoud, 1999b, p. 6) (italics mine).

In 1996, Meirieu and Develay suggested problems with "a 'transport' metaphor that designates an object that moves from one point to another, staying identical, when we know that in relation to knowledge, this can't be the case; if it were so, there would never be acquisition and progress" (p. 39) They go on to say that transfer implies a linear model in which something is first acquired, and subsequently transferred, when in fact most research suggests the opposite (Meirieu & Develay, 1996, p. 1). While acknowledging the convenience of a single term, they caution that in educational settings, the tradeoff of that convenience is the entrenchment of a term and a concept, in policy and curriculum, that loses the rich diversity and nuance of the actual phenomenon, with sometimes quite damaging results.

Perrenoud (1999b) adds that maintaining the term *transfer* can actually hide aspects of the way knowledge transformation functions. For example, "the source of transfer is far from associated with precise situations; we are always drawing on knowledge from multiple and diverse situations, each one having a range of similarities-differences with the current situation" (Perrenoud, 1999b, p. 7); complex activities demand orchestration and integration of multiple cognitive resources. Perrenoud suggests that transfer does not exclude but certainly

does not support the idea that the knowledge being transferred is transformed en route.

Meirieu (1994) points out that the carry model also posits what is carried as static, fixed, or objectified—much like a consumer good—and again not itself transformed in the use and the relationship. And finally, Perrenoud suggests that we advantage students who are more focused on product than on process, as well as students who are better at accumulating knowledge than at applying it, if we maintain the transfer metaphor. Perrenoud goes so far as to call this an elitist version of education (1999b, p. 9) supported by testing; actual study of knowledge transformation is, of course, much harder to achieve.

In European and US discussions, transfer has been alternately called generalization (Hatano & Greeno, 1999), expansive learning (Davydov, 1990; Engeström, 2001), or even simply effective learning (Meirieu & Develay, 1996) in educational research. Alternate terms developed or adopted in European writing studies in more recent years have included:

(1) *Acculturation*: Developed in particular in French scholarship, as we see in the work of Deschepper (2008) and Reuter (2006). Deschepper proposes that a "didactics of university discourses" depends on acculturation to ensure the reuse and reinvention of writing abilities at liminal stages (2008, p. 3). Reuter highlights J. Goody's influence on our understanding of literacies and reflective distance, two key transfer notions, in particular when they are used in the context of seeing a continuum of writing development. "Entry into writing," Reuter suggests, "is a process of meaning construction and acculturation" (2006, p. 133). He underscores, connecting to both J. Goody and Vygotsky, that writing by its nature privileges the very things that enable transfer: reflection, abstraction, distance, analysis, awareness, and intentionality (Reuter, 2006, pp. 135–136).

(2) *Appropriation*: This concept has been developed by hundreds of scholars over decades and covers the given that knowledge must be appropriated—owned, wholly integrated into one's worldview, capacity base, way of working, and in the process transformed—if it is to function over time and in new tasks and settings. Subsets of this appropriation might be what Meirieu and Develay (1996) call re-ordering, regulating, or orchestrating.

(3) *Autonomisation* (see Astolfi, 2002): The insistence on knowledge becoming autonomous from its initial learning environment, topic, or framing; knowledge transformation is thus knowledge decontextualisation that enables subsequent recontextualization.

(4) *Didactic transposition* (see Chevallard, 1985): This didactics notion, mentioned earlier, is certainly not equivalent to transfer but is still quite aligned. Didactic transposition is, roughly, the transformation of scholarly knowledge into

knowledge that is accessible in learning contexts. If writing knowledge transformation from one context to another is a goal, then the research on didactic transposition offers a particular way to model that writing knowledge.

(5) *Reinvesting*: Perrenoud suggests that "reinvesting is synonymous with transfer: transfer as reinvesting of acquired knowledge . . . the capacity to reinvest cognitive knowledge in new situations" (2000, p. 57). This term complexifies the activity by emphasizing the personal motivation, the awareness, and the choice (we invest in activity that matters) over the more mechanical "movement from => to" of transfer.

(6) *Translation*: The concept has been developed by various French scholars drawing from Serres (1974) and defined as a "process in which the transport entrains transformation" and that demands a continuity "in which practices emerge, develop, transform into routines, and eventually disappear" in organizations (Hilaricus, 2011, p. 5). This concept draws from linguistics, social anthropology, political science, sociology, and ethnomethodology to emphasize the social nature of knowledge construction and transformation (Hilaricus, 2011). French sociolinguist Bernard Gardin proposes that language interactions and genres can be described on a translatable-to-untranslatable continuum: "All learning is movement from the known to the unknown, scaffolded in particular ways, and always understood as neither entirely the same (no movement in meaning) nor entirely different (resulting in a total breakdown in communication)" (as cited in Donahue, 2008, p. 126). The overly similar and the overly different both prevent transformative reuse and exchange.

(7) *Mobilization of cognitive resources*: Perrenoud argues for this much stronger term for the transformative action of knowledge reuse. He suggests that "it does not postulate the existence of analogies between current and previous situations; covers as much the creation of original responses as the simple reproduction of routinized responses; describes mental *work*, costly, visible, of varying lengths; evokes a dynamic rather than a displacement; targets diverse obstacles (cognitive, affective, relational); leaves open the question of situation-specific concepts, representations, and knowledge; suggests orchestration of multiple and heterogeneous resources (1999b, p. 11).

These largely European frames can offer useful parallels to transformative reuse (Beach, 2003) or, in terms of discourse specifically, *reprise-modification* (François, 1998). The work on understanding the relationship between the individual-specific utterance and the generic or shared social fabric of language is quite relevant (François, 1998). In this understanding, the application changes the use; François calls this reprise-modification, literally "re-taking-up-modifying," which he posits as the irrevocable nature of all language production, whether spoken or written, from a child's first word onward. François also offers

us the concept of *orientation* for modeling the learner's ability to orient in new situations. The orienting ability applies to behavior as well as previous knowledge: someone who orients can read a new context's cues and expectations, can expect to have to do that reading (an expectation generally associated with expertise), and is already oriented by previous experiences (François, 1998). Every learner, every language-user, every writer is pre-oriented by past experiences; every learner can engage in orientation and can recognize his or her orientation, as well (Donahue, 2012). Orientation as a linguistic-discursive notion is the fundamental cognitive activity that enables what transfer studies have identified as transfer to occur. The beauty of its implications is in its fluidity and anti-determinism: pre-orientation is not pre-direction.

TRANSFER FROM OTHER DISCIPLINARY POINTS OF VIEW

If we pursue the implications of the uncharted territory metaphor provided by Moore (2012), we can imagine that hazards, unexpected encounters, troubling sights, and different kinds of terrain are part of the mapping process. I believe we can deepen and grow our own knowledge about transformative reuse by troubling our understandings via these kinds of encounters. As we have just seen, the scholarly sense of transfer has been evolving and developing fruitfully, in ways that can lead us to question whether indeed "transfer" is the best term to continue to use to capture the complex phenomenon we are after. In the previous sections, both critiques of the term and alternative ways of thinking about the term from US and European scholars provided some ways to do this questioning. Now I will turn to transfer as seen from alternative disciplinary points of view as an additional way to embrace conceptual complexity.

Here, I am pointing not to uses that resist or reject the term transfer, but to uses that develop transfer as something other than what education research and US writing studies have posited. That is: the concept of transfer has different histories, a broader scholarship, that can push us to explore the perhaps assumed pedagogical goals on which the current discussions about transfer have stood until more recently, and enable rich integration of complementary strands of twenty-first-century thought. They raise a question for composition about the potential value of entering the global marketplace of ideas about writing and knowledge transformation.

It is the right time in our trajectory to consider multiple other ways the term transfer is used and understood in that global marketplace, which includes other disciplines: the domains of psychoanalysis, L1 to L2 interrelationships, corporate practices, researchers' knowledge dissemination, education sciences, and linguistics. Most of these other uses of transfer have developed outside of the US;

all have developed outside of the discipline of writing studies. It is worth noting that writing scholarship outside the US is quite often rooted in disciplines such as linguistics, didactics, or language learning, so the international is often tightly linked to different disciplines that can illuminate our thinking.

Attention to these uses and developments, some quite old and some quite new, can usefully trouble us and can fill in some of the gaps we see evoked by Moore (2012) and others, helping us to look forward. Each offers a way of thinking about the mechanisms of transfer and can thus lead to alternate terms and alternate understandings. Perhaps even more importantly, we can sharpen the distinctions among different threads and situate US and writing studies work very effectively in the broader transfer landscape. Of course, in maybe the most distant and most generally well-known use of the term, transfer or transference in psychology and psychoanalysis is an *affective relationship*—with a new person or object by association with a previous one—the principle of assigning feelings to someone other than the person actually involved. While psychology and psychoanalysis at first glance seem far from our interests, connections between our study of transfer and the work done in that field in affect and identity might prove very useful. For example, as we study student-teacher relationships and their effects on enabling or inhibiting transformative work, this angle could help us to understand how previous learning experiences or experiences outside of school could be shaping students' willingness to engage with a particular instructor or peers. The psychology of these interactions must be part of what we study.

In L1-L2 research, transfer is a frequently studied and central concern. The question here is whether the linguistic and discursive knowledge of an individual speaker or writer in one language can be used, adapted, and transformed in another, and indeed whether that is productive or obstructive. There is a rich body of scholarship around the world about language and discourse knowledge transfer between L1 and L2 contexts, in writing and speaking, with extended debates about its role in developing writers. This transfer research, most often by linguists or didacticians, has focused on the connections between L1 and L2 (that is, how is L1 a resource and an obstacle for L2 and vice versa). For example, it suggests that L1 literacy abilities and strategies do not automatically lend themselves to successful work in L2 writing. Some writing process strategies transfer but, in particular in lower-proficiency writers, others do not (Wolfersberger, 2003); L1 abilities can have long-term effects on L2 development of those abilities (Sparks, Patton, Ganschow & Humbach, 2009); L1 abilities can only be tapped once L2 proficiency is far enough along to enable it (Ito, 2009). Work on multilingualism and these transfer effects is also taking shape, grounded in 1990s research on multilingualism and multicompetence (Cook, 1992). Of particular interest is the research suggesting that third-language acquisition may reuse, transform,

and manipulate more from the speaker or writer's second language than the first (Heidrick, 2006). This language knowledge transfer scholarship is a resource by and large untapped to date in discussions about university writing and knowledge transformation more broadly.

Fairly recently, the term transfer has been used largely outside of the US to designate the ways in which research results are made available to a broader public. Earlier work in education sciences, notably in Europe in my experience, also tilled the ground quite handily for these current discussions of transfer and transformation. Most notably, research grounded in the concept of didactic transposition (Chevallard, 1985) or cognitive transposition has emphasized that it is teachers who must transform their knowledge, in school settings, to move it from expert insider knowledge states to learnable states. That is, scholarly knowledge itself must be transformed in order to be transformable. European and Canadian conferences share how to best create the transfer of scholarly knowledge to non-scholarly audiences in other contexts than school learning. The 2013 Association Française Pour le Savoir (ACFAS) conference strand on knowledge transfer featured some 30 sessions on the topic, with titles such as "Can Academics Survive by Creating Transfer Activities?" and "Mixed-Method Research about the Factors that Influence Knowledge Transfer Activities among Faculty at the University of Montreal." The University of Montreal (2013) web page specifies the many forms of this kind of knowledge transfer. This angle seems more closely tied to the work done in and by technology transfer offices in universities in the international commerce practice of using knowledge developed in university settings for public good or patented products (see Chen, 1996; Teece, Rumelt & Winter, 1994).

But here the transfer is in realms other than technology, and its purpose is to underscore other kinds of knowledge, non-commercial knowledge, as public good. In addition to the very useful attention to faculty knowledge—how it works, how it builds, how it transforms in its dissemination—this sense of transfer offers a way to think about transfer in reverse, transformation that opens knowledge to transfer. But it also implies transfer is linear movement, the movement of knowledge from expert knowers to non-expert recipients. Knowledge production seems to be understood in a consumer model.

Corporate practice also embraced the concept of transfer as early as the 1980s. In this venue, transfer is what allows organizations to function effectively. Research and practice focus heavily on the ways to ensure transfer of knowledge and know-how within corporations. Indeed, full-day workshops are offered in companies to support and enable this transfer. Hilaricus (2011) notes that this research has fallen into two camps: the rationalist perspective that commodifies knowledge (what Bacon, 2013, has called the "pack and carry" version

of transfer) and the social constructivist version. Most studies, she notes, have been in the rationalist tradition. But the social constructivist perspective sees organizations' knowledge as situated, relational, mediated by artifacts, rooted in interactions and acquired by participation in communities of practice, and always temporary and renegotiable (Hilaricus, 2011, p. 5). Firms, seen as social communities (Kogut & Zander, 1995), have of course long been studied for their modes of working, in particular in organizational psychology. In the past 10 years, the research has informed explicit employee development workshops for fostering transfer of internal knowledge to ensure company strength and individual integration. In some ways, these widespread models of transfer are precisely what we seek to resist in higher education writing work: uniformity, commodification, and preservation of sameness. Reading this scholarship helps us to sharply delineate our work.

In a useful contribution to that resistance, the European scholarship is closely tied to research on the social construction of knowledge. The argument made is precisely that transfer suggests commodification of knowledge, knowledge as a good to be exchanged, while in fact the way knowledge is co-constructed in every context would suggest that we need a term that resists such commodification. Indeed, Perrenoud, echoing US composition discussions about social construction, notes that "transfer implies a portable knowledge. But we know that knowledge is a never-completed construction, dependent on the context in which it is constructed, and incorporated in the actor" (1999b, p. 5).

These versions of the transfer concept emphasize learning in different ways and function as alternate lenses in the transfer discussion. New synthesized knowledge from these uses serves us well in US composition discussions, helping us to remember that much of what has been discussed recently in transfer scholarship finds strands and echoes in many diverse domains. I hope these other transfer discussions can help us to encounter our own boundary-crossing in knowledge that makes trouble for us: troublesome knowledge that is generative for our conversation (see Moore & Anson, and Qualley, this volume, for a discussion of "troublesome knowledge"; Perkins, 2006). It is not clear how much boundary-crossing is needed or how far the usual worldview should be disrupted in order to generate learning and transformation, though certainly we know that some degree of trouble is important for learning and transformation of knowledge (see Vygotsky, 2012, for a related discussion of zones of proximal development). I would argue that research—including all of the active current scholarship around transformation of writing knowledge—can have precisely this role for writing teachers and scholars.

Perkins interestingly ties troublesome knowledge to constructivism, a knowledge-development model that has long been at the heart of both educa-

tional theory and writing studies; knowledge "makes trouble for learners, and . . . the constructivist toolkit speaks to those troubles" (2006, p. 34). Perkins credits much earlier scholarship, including Bransford, Franks, Vye, and Sherwood (1989) and Bereiter and Scardamalia (1985), for helping us understand knowledge that can be troublesome because it is routine (non-meta-cognitive) or is inert (not activated) and thus not transferrable (2006, p. 37). But Perkins' other categories are equally useful: conceptually difficult knowledge, alien knowledge, and tacit knowledge can all trouble forward movement; indeed, tacit knowledge can be particularly troublesome (as in, causing trouble to learning) (2006, pp. 44–45).

Perkins, though, seems to imply that troublesome knowledge is knowledge that obstructs learning, knowledge to get past somehow, in order to transfer-transform. Kumashiro (2004) uses the term *troubling knowledge*, suggesting that it is this kind of knowledge that generates learning. While much has been made of troublesome knowledge in the transfer discussion, we might perhaps find it useful to also reference troubling knowledge. For Kumashiro, learning and teaching should result in a crisis state, a "state of emotional discomfort or disorientation that calls on [us] to make some change" (2004, p. 28), knowledge that problematizes and that disrupts the taken-for-granted. We can, Kumashiro suggests, "work paradoxically with knowledge, simultaneously see what different insights, identities, practices, and changes it makes possible while critically examining that knowledge (and how it came to be known)" (2004, p. 29). It is not about mastery, but about examining different uses and effects. Kumashiro contrasts this with comforting knowledge, the kind of knowledge that makes us feel mastery is possible, achieved via the repetition of familiar practices and understandings. I would like to suggest, then, that alternate transfer research can serve as both troubling and troublesome knowledge for us, of the kind that can be generative.

The wealth of research available about human development in general (and in particular child, adolescent, and early adult development) can add another essential layer to our understanding of how a learner might be able or not to transform and reuse knowledge adaptively and flexibly at any given point in life. Any number of variables, we thus see, could be affecting this ability. I would like now to look more closely at a particular domain of European research: linguistics, the study of language, a field whose direct links to writing have been understudied in the US knowledge-transformation research. This domain can provide productively troubling research knowledge for us. Linguistics, university writing development, and studies of writing knowledge reuse and transformation might be imagined as a triangle in which transformation research, transformation models, and linguistics research inform our understanding of writing

development, while studies of writing knowledge transformation and linguistics inform each other.

Perkins and Salomon proposed in 2007 that everyday knowledge and know-how transfer naturally. Linguistics does not use the term transfer, but the conceptual work of linguistics suggests that transfer or adaptive transformation in language acquisition and language function is always occurring, in its routinized but also in its transformative modes. We might thus focus, as Perrenoud (1999a, 1999b, 2000) has suggested, more on the "what," the "how," and even the "why," than the "whether," as some form of transfer is always occurring. As Meirieu and Develay argue, "Knowing whether transfer is itself possible is meaningless . . . knowing which practice enables transfer and which conditions are essential to it" is where our interest should lie (1996, p. 1).

If we acknowledge that writing is a language act—though of course it is not always or only that—linguistics offers a particular window on the knowledge we hope will transfer and how transformation and generalization work. Linguistics thus has significant implications for the evolving research on transfer in terms of both method and conceptual framework. In particular, it leads us to additional concrete questions about what kind(s) of knowledge linguistic knowledge is, and how writing knowledge is a linguistic knowledge whose transformation and reuse we can study in particular empirical ways. Linguistic knowledge has been cited as one of the domains that needs charting. The kinds of linguistics I am referencing here are in two domains: European functional linguistics (which is not systemic functional linguistics), and Bakhtinian/Volosinovian-style linguistics.

For traditional linguists, language acquisition is always transformation in process. Language functions in precisely that way. Children acquire words, meanings, phonology, morphology, and syntax in an ongoing process that cannot function without transfer-transformation. Every single learned aspect is used, reused, extended, and generalized. In fact, generalization is a necessary part of acquisition of the grammar of a language, as is reuse, in new contexts of existing linguistic knowledge. Every utterance, spoken or written, is transferring something, or we would have to perpetually start anew or never speak (see also Samson, 2002). Linguistic rules (in the descriptive sense) are generalized in this process. Every utterance, every language user's combination of words, syntax, grammar, and semiotics, is both already there (in part or sometimes in whole) and new, shaped to a new context, purpose, or meaning.

Of course, learning writing involves many components in addition to learning language. But my thought is that we can see new ways to conceptualize and understand transfer by looking at language knowledge transformation. Beyond basic linguistics developments, European functional linguistics and the evolution of Bakhtinian/Volosinovian linguistic theory about language, genres, and

discourse have focused on understanding the ways in which sounds, words, and meaning-making constructions—utterances—function. In Bakhtinian/Volosinovian terms, the utterance is always new, though never original. Language use, spoken or written, *is* transformation. French linguist François (1998) has shown in multiple analyses of both children's texts and published texts that individual utterances work in relation to the shared social fabric of utterances already said and to be said. Children acquiring language are acquiring words, sounds, syntax, and grammar, with no particular effort, and Bakhtinian thinking suggests that children acquire genres in the same way. Genres, in this case, structure and are structured by thought; they flex and adapt; they offer stability and innovation. Years of subsequent analyses, operationalizing Bakhtinian notions, support this suggestion (e.g., Kara, 2004; Lillis & Rai, 2012; Reuter, 2004; Rinck, 2006).

In terms of written and spoken discourse, the study of given/new constructions (grounded in the Prague School's analyses of theme/rheme structures) offers similar insight at the level of syntactic coherence and larger discursive units: Utterances co-construct meaning most effectively in a given-new sequence, one which in fact moves knowledge from existing to new—simultaneously transferring and transforming it.

As I noted above, in linguistics terms, an utterance of any kind is some form of transformation. Every utterance, spoken or written, is transferring-transforming something; otherwise we would perpetually start anew—very inefficient—or never speak. So, we can already imagine some of the parallels between linguistics research and writing knowledge transfer concerns. If, as Donahue has suggested, "all learning [is] movement from the known to the unknown, scaffolded in particular ways, and always understood as neither entirely the same (no movement in meaning) nor entirely different (resulting in a total breakdown in communication)" (2012, p. 162), then the close relation between this and transfer is clear. The linguistic generalization cited above is a natural human learning activity, in particular in terms of language, as is hypercorrection (overgeneralization). Overgeneralization in particular, a well-known linguistic phenomenon, is potentially quite illuminating for thinking through how students' previously developed writing knowledge might reappear in unhelpful ways.

Bakhtinian notions of speech genres, their adaptive flexibility and their affording structuring quality also bear much more exploration in relation to the transfer discussion. Certainly some strong work has been done in this area already (e.g., Bawarshi, 2007, on antecedent genres), though not generally from a Bakhtinian genre perspective and not always from a perspective of genres as themselves adaptive and flexible. Rinck and Sitri suggest that understanding these genres is key to understanding student progress, but that Bakhtin/Volosinov did not supply us with extended categories useful to analyzing genres

(2012, p. 3). I believe, however, that Bakhtinian/Volosinovian thought provides us the tools for creating the necessary dynamic categories.

Linguistic work about student writing has also evolved, focused in part on *transversal* versus *specific* knowledge. Grammar knowledge, for example, is cited by Rinck and Sitri (2012) as transversal knowledge in their linguistic analyses of university student writing. While its use may differ in different contexts, linguistic knowledge of, say, syntax or morphology is transversal, as opposed to conventional knowledge of something like grammatical sentence construction. The US discussion of transfer has not focused much on this aspect of language use, though research in other US writing studies domains has. It has focused on disciplinary versus general education writing, but not in terms of linguistic knowledge (see below).

There are also key differences between writing and more general language knowledge, and these differences can be just as important for insights into transformative-adaptive reuse. Here are just a few:

- Is writing a "higher order" construction? (Is "higher order" even a legitimate term?) Russell (1995) has famously described writing knowledge using a ball metaphor: "ball-ness" as the generic quality of a ball that does not, for all that, allow ball users to know how it applies in different ballgame contexts. But in initial spoken language acquisition, we do generalize effortlessly. That is our whole purpose as linguistic beings. As Bakhtin notes, we do not live in the dictionary but in used and transformed linguistic experiences. What kind of writing knowledge parallels this? When does writing knowledge not automatically generalize? Those contexts are worth studying.
- Decades of scholarship underscore that writing in educational contexts often has a learning purpose that is only valued in school. This is not like typical language learning (though certainly it is the case for other forms of language learning such as learning a new language at school). We know we do not need meta knowledge in initial language learning, at least not consciously. Most of us can use grammatical structures correctly without being able to explain them. We are not sure how much meta we need in writing; some studies suggest that without the meta we cannot say the learning happened (e.g., as reviewed in Bransford et al., 1999); others say learning often occurs without the ability to articulate it (Donahue, 2010). In language it seems that speakers take for granted the transferability (though perhaps not in different registers).
- It is possible that a difference between linguistics/language and writing is in the user's assumption about transfer. In language acquisition

> and reuse, every language user's assumption is that language (phonology, morphology, syntax, etc.) is fundamentally reusable, although there are of course layers of social-discursive conventions to take into account. In writing, Bergmann and Zepernick (2007) suggest that students do not look for that reuse because they do not assume it is possible. An intriguing area for future research can be to explore this very difference. Could part of the way to enable transfer be to explore with students their assumptions about language in relation to writing? This distinction has been amply discussed in expansive research on speech and writing. I am not so much interested in that distinction as in a different purpose—to suggest looking at language acquisition (in speech) and language function (in speech and writing).

Some scholars have critiqued the fact that much transfer or transformation research has focused on one feature at a time, one determinant of transfer. What is needed, Hilaricus suggests, is complex studies that account for the interaction of multiple determinants in enabling writing knowledge reuse or transformative adaptation (2011, p. 5). This volume offers some of these; replicable, aggregable, data-driven (RAD) research supports the building and the dialogue across research projects that enable such multi-layered work. We know that transformative reuse of any learned knowledge is exceedingly difficult to study empirically, in the same way it is difficult with any assessment to establish what a learner has learned and what might account for that learning; multiple points of entry into the learning moment—or the transformative moment—are essential.

Both education and linguistics research from Europe can open up immense possibilities for the *methods* of US research on writing knowledge transformation. Linguistics can contribute via specific methods useful to studying writing knowledge transformation, reuse, and adaptation. *The Elon Statement on Transfer* notes the typical methods we have seen in US higher education writing research about transfer, "a variety of qualitative and quantitative methods to identify evidence of and measure transfer, including surveys, focus groups, interviews, classroom observations, text analysis, discourse analysis, composing-aloud and think-aloud protocols, group discussion logs, and analysis of students' course work and faculty comments" (2015, p. 5). While the methods outlined suggest a broad base, in fact text-based analyses of students' reuse and appropriation of knowledge have been rare to date. Text-in-context analysis is an approach that has been less frequently used in US research about writing transitions; while it can never give the whole picture, it is perhaps a neglected window into students' evolutions. The text analysis process can lead us to treating qualitative data quantitatively, via segmenting and coding of verbal data; this powerful approach

contributes extensively to knowledge transfer-transformation research via direct artifact analysis. More generally, methods in linguistics cover a range, from sequestered (experimental) to *in situ* work. Linguistic methods of analysis have enabled much of the knowledge explored here in very specific ways, for example, through descriptive linguistics and discourse analysis (see Rinck & Sitri, 2012, on this topic). Education research has decades of history in setting up carefully constructed experimental or intervention studies (see Doly, 2002, for comparison study between two teaching styles and students' metacognitive abilities). We stand to gain from strong research traditions and study results that will increase our status as a research field among the disciplines.

Finally, the transfer discussion focuses on the mechanisms or moments of knowledge reuse and transformation. Because we need to understand the interaction between the mechanism and what is being transformed, it has also raised questions about the nature of the knowledge in question. What kind of knowledge is writing? Do we want students to transform writing *knowledge*? Writing *knowing*? Writing *know-how*? Or all of these, and what more? Linguistics helps us here, as well, to tease out possible answers. If we are to study how that knowledge transforms, generalizes, applies, and extends, we need to grapple with this question.

Traditionally defined, knowledge can be theoretical or practical. It might include[5] facts, information, skills acquired through education, linguistic knowledge (descriptive), rules and conventions, understanding, abilities, structural knowledge, generic knowledge, rhetorical knowledge, and knowledge as epistemological frames.[6] In philosophy, knowledge is understanding, as opposed to opinion. Writing knowledge can range from how to hold a pen to extremely sophisticated know-how in intertextual movements. The types of knowledge that interest composition studies—strategies, processes, values, rhetorical flexibility, linguistic knowledge, and knowledge of self as writer—are sometimes different from those that other disciplines develop. This makes them tricky to study. French scholar Le Boterf (1994) offers an additional possibility for knowledge as *savoir-mobiliser*, which means both in action and intentionally motivated—knowing how to mobilize.

Knowledge (in a field) is also method. We might consider method as a site for particular emphasis in transfer or knowledge transformation research. The method of knowledge generation differs in, say, anthropology, or writing, or education, or biology. Anthropology studies humans in context. Education studies humans as learners. Biology studies material workings. Writing studies writers and texts, production and process, how we craft arguments, and how we rhetorically move. These methods, as disciplinary knowledge, lead to different frames for knowledge transformation.

Some transfer research addresses the knowledge question specifically through analysis of threshold concepts (Meyer & Land, 2003) and troublesome knowledge (Perkins, 2006). Concepts are categorizers that open up new ways of thinking. They function in activity networks. The threshold concepts model that Meyer and Land (2003) initially presented allows us to ask how a threshold concept functions in writing, in a discipline that itself is caught in a timeless push-pull between broad-based, cross-disciplinary ownership and application and writing studies' epistemological specificity. How is it like or not like a threshold concept in another discipline?

Genre has been cited as a possible threshold concept (Adler-Kassner, Clark, Robertson, Taczak & Yancey, this volume; Adler-Kassner, Majewski & Koshnick, 2012). Threshold concepts are transformed ways of understanding that open up new ways of thinking and learning, once the learner steps over that threshold. Genre is an interpretable notion, certainly re-imagined and re-studied from a range of different vantage points, a concept that shapes itself to different epistemological purposes and is owned—as is writing knowledge more broadly—by all disciplines. How standard or flexible can a threshold concept be to do its job? In a way, this leads back to the question, what is writing knowledge, and indeed back to the question, what is writing as a discipline? Writing seems to be uniquely both its own discipline and a shared knowledge base across all disciplines. It is trans-disciplinary, and in fact makes possible the intellectual work among the pre-liminal-liminal-postliminal stages of knowledge development cited in threshold concepts work, but it is not yet clear how they are the equivalent of these concepts in, say, biology or sociology.

Threshold concepts thus lead us right to another timeless and rich question about disciplinary knowledge, general education, the liberal arts, writing courses, and, ultimately, ownership of writing and writing knowledge. The question is at the heart of models of education out there and indeed at the heart of the history of higher education—for example, in the liberal arts versus professional preparation split, as Adler-Kassner et al. (2012) remind us. If general education is supposed to offer a common experience of values, of knowledge, and the major is meant to offer disciplinary specialization (which we would expect to include both values and knowledge specific to that discipline), then it would seem that interest in transfer would be widespread. It is possible that general education courses confront difficulties because their nature as an introduction to a discipline for non-specialists does not lend itself to threshold concepts, or perhaps that these courses call on different threshold concepts.

In a mild way, we see this at my institution with our first-year writing sequence. The first course is taught by writing faculty. The second course, taught by faculty in disciplines other than writing, cannot teach writing for a discipline,

yet it cannot *not* be disciplinarily infused. Dartmouth is currently carrying out a study of first-year writers as they transition from a general writing course to that-discipline-inspired, first-year seminar, both courses part of a required first-year sequence. This is a critical transition for our students, from an entry-level college course in which writing is the primary focus to a bridge course that introduces them to faculty who are not primarily writing specialists, to a second new phase in their college writing experience. The study examines 200 first-year students as they work through the two-term sequence, analyzing their early and late work in each course: methods of organizing material, thesis statements, coherence, types of evidence, citation practices, and so on. The students' work is followed both in case studies of individual students across the sequences they took and in aggregate analyses of patterns of change in the practices evidenced in their texts. It will benefit us to study what writing threshold concepts would work in this context.

CONCLUSION

What we really want, I think, is to study and understand the transformation-in-evolution of writing *knowledge,* writing *knowing*, and writing *know-how.* Our pedagogical goal of helping students know how to write drives our interest in transfer. The research about writing knowledge and how it is flexibly reused, adapted, translated, transitioned, and generalized is thus a vitally important development in our field. This volume makes that quite clear. Both education research and linguistics research suggest that transfer is always happening, and the deeper interest is not whether but how it happens. However, when we consider how transfer has developed in other domains, it seems both that other points of view can shake up our thinking and that perhaps a different meta-term or a packet of terms would move us collectively forward at this point. "Transformation" could be such a term. Every researcher comes back to transformation as the real activity of transfer. Every article evokes transformation, and every use of transfer in the domains evoked here—L1/L2, making knowledge available to the public, language acquisition, and so on—has transformation at its heart. Transformation is not as handy in a sentence, but it might be truer to the actual way writing knowledge works. It may not be just the term we need either, but the discussion about how to name what we are looking for will surely itself be transformative.

In addition, research about this knowledge transformation is still young enough to resist the desire to begin applying it to curricular decisions. The number of studies is growing, as Moore (2012) and others report. But the results do not always concur, the methods and populations are quite different, and the tapestry of research results that should provide a support for action has not yet been woven. It is providing a new way to think about our relationship to other

disciplines and to our work as writing faculty. For example, when we talk about writing knowledge transfer across years and disciplines in school, it sometimes seems our colleagues in other disciplines want all knowledge about writing to become automatic, while we argue as writing faculty that it cannot be. The writing knowledge transformation discussion offers specific evidence about this tension, and indeed the vast writing across the curriculum scholarship and writing in the disciplines scholarship—in the US, Europe, and other contexts—can be tapped in this particular inquiry. It would be well worth studying the many forms of transfer covered in this chapter, in a way that could uncover shared threads and universals across them; that might be a future step in the work this chapter sets out.

Other future domains of writing research might focus on understudied aspects of knowledge transformation such as its connection to developmental research. It's interesting that Bloom's taxonomy of cognitive domains, for example, posits application as a lower-order activity over analysis and synthesis, the kinds of cognitive activities that would seem most likely to support writing knowledge transformation. Other longstanding cognitive research in education suggests that different individuals are simply developmentally able to transform particular knowledges at different stages. In terms of writing knowledge transformation, this is potentially a very fruitful additional direction. We know, too, from this research that new knowledge can build on previous knowledge but it can also displace that previous knowledge. Studying these different paths is essential to our growing understanding; research in other disciplines and other national contexts can directly contribute. Taking the path of increasing complexity, with its accompanying uncertainties and diversities, will lead us in US writing studies to having a strong voice in the *global* conversation about writing, knowledge, and transformative, forward-moving reuse.

NOTES

1. In some ways, "global" and "cross-disciplinary" are tightly linked, as different cultural contexts foster different disciplinary grounds for similar research questions.
2. Bransford, Brown, and Cocking's (1999) *How People Learn: Brain, Mind, Experience, and School*, a non-writing-specific review of transfer scholarship, primarily in Chapter 3, "Learning and Transfer," is one of several key reasons for much of the interest in knowledge transfer that has developed in the US writing studies community recently. See Donahue's (2012) Transfer, Portability, Generalization: (How) Does Composition Expertise "Carry"? and Moore's (2012) Mapping the Questions: The State of Writing-Related Transfer Research for overviews of much of the recent work in writing contexts.

3. This article isn't the place for contesting that claim, but it has been clearly contested elsewhere. See for example Donahue 2009; Anson and Donahue 2014.
4. All translations of French scholarship in this chapter were done by this author.
5. This is one way to divide it up—and this is surely quite incomplete, just a first attempt to think about what we might mean.
6. Scholarship about or pedagogical treatment of writing knowledge transfer should always specify which knowledge(s) are targeted.

REFERENCES

Adler-Kassner, L., Majewski, J. & Koshnick, D. (2012). The value of troublesome knowledge: Transfer and threshold concepts in writing and history. *Composition Forum, 26*. Retrieved from http://compositionforum.com/issue/26/troublesome-knowledge-threshold.php.

Alexander, P. A. & Murphy, P. K. (1999). Nurturing the seeds of transfer: A domain-specific perspective. *International Journal of Educational Research, 31*(7), 561–576.

Anson, C. & Donahue, C. (2014). Curricular topographia: Deconstructing "writing program administration" in an international context. In D. Martins (Ed.), *Transnational writing program administration* (pp. 21–47). Logan, UT: Utah State University Press.

Astolfi, J. P. (2002). Savoir, c'est pouvoir transférer [To know is to be able to transfer]. *Cahiers Pédagogiques, 408,* 9.

Bacon, N. (2012, June). Working paper presented at the meeting of Elon University Research Seminar on Critical Transitions: Writing and the Question of Transfer, Elon, NC.

Bartholomae, D. (1986). Inventing the university. *Journal of Basic Writing, 5*(1), 4–23.

Bawarshi, A. (2007). *Accessing academic discourse: The influence of first-year composition students' prior genre knowledge*. [Flyer].

Beach, K. (2003). Consequential transitions: A developmental view of knowledge propagation through social organizations. In T. Tuomi-Gröhn & Y. Engeström (Eds.), *Between school and work: New perspectives on transfer and boundary-crossing* (pp. 39–62). Amsterdam, NL: Pergamon.

Bereiter, C. & Scardamalia, M. (1985). Cognitive coping strategies and the problem of inert knowledge. *Thinking and Learning Skills, 2*, 65–80.

Bergmann, L. S. & Zepernick, J. (2007). Disciplinarity and transfer: Students' perceptions of learning to write. *WPA: Writing Program Administration, 31*(1–2), 124–149.

Bourdieu, P. (1977). *Outline of a theory of practice*. (R. Nice, Trans.) Cambridge, UK: Cambridge University Press.

Bransford, J. D., Brown, A. & Cocking, R. (1999). *How people learn: Mind, brain, experience, and school.* Washington, DC: National Research Council.

Bransford, J. D., Franks, J. J., Vye, N. J. & Sherwood, R. D. (1989). New approaches to instruction: Because wisdom can't be told. In S. Vosniadou & A. Ortony (Eds.),

Similarity and analogical reasoning (pp. 470–497). New York: Cambridge University Press.

Cauzinille-Marmèche, E. (1991). Apprendre à utiliser sa connaissance pour la résolution de problèmes: Analogie et transfert [Learning to use one's cognition for problem solving: Comparisons and transfers]. *Bulletin de Psychologie, Tome XLIV*, *399*, 156–164.

Center for Engaged Learning. (2013). Conference program. *Elon University Research Seminar on Critical Transitions: Writing and the Question of Transfer*. Elon, NC: Elon University.

Chen, M. (1996). *Managing international technology transfer*. London: International Thompson.

Chevallard, Y. (1985). *La transposition didactique: Du savoir savant au savoir enseigné* [Didactic transposition: From expert knowledge to knowledge that is taught]. Grenoble, FR: La Pensée Sauvage.

Cook, V. J. (1992). Evidence for multi-competence. *Language Learning*, *42*(4), 557–591.

Davydov, V. V. (1990). Types of generalization in instruction: Logical and psychological problems in the structuring of school curricula. *Soviet Studies in Mathematics Education*, *2*.

Delcambre, I. (2001). Formes diverses d'articulation entre discours d'autrui et discours propre: Analyses de commentaires de textes theoriques [Diverse forms of articulation between the discourse of others and one's own discourse: Analysis of commentaries on theoretical texts]. *LIDIL: Revue de Linguistique et de Didactique des Langues, 24*, 136–166.

Deschepper, C. (2008, April). *Rapport à l'écrit, dimension pragmatique, ancrage disciplinaire, par ou passe l'acculturation aux discours universitaires?* [Relationships to writing, pragmatic dimensions, disciplinary anchoring: What path does acculturation to university discourses take?]. Paper presented at the meeting of Journée Internationale du FLE (JIFLE), Université de la Réunion, Saint-Denis, Réunion.

Desilets, M. (1997). Connaissances déclaratives et procédurales: Des confusions à dissiper [Declarative and procedural knowledge: Confusions to dissipate]. *Revue des Sciences de L'éducation*, *XXIII*(2), 289–308.

Doly, A-M. (2002). Métacognition et transfert des apprentissages à l'école [Metacognition and transfer of learning at school]. *Cahiers Pédagogiques*, *408*. Retrieved from http://www.cahiers-pedagogiques.com/Metacognition-et-transfert-des-apprentissages-a-l-ecole.

Donahue, C. (2004). Student writing as negotiation: Fundamental movements between the common and the specific in French essays. In F. Kostouli (Ed.), *Writing in context(s): Textual practices and learning processes in sociocultural settings*. Amsterdam, NL: Kluwer Academic Publishers.

Donahue, C. (2008). Ecrire à l'université: Analyse compare, France-Etats Unis. [Writing at the university: Comparative analysis, France-US]. Villeneuve-d'Ascq, FR: Presses Universitaires du Septentrion.

Donahue, C. (2009). "Internationalization" and Composition Studies: Re-orienting the discourse, *College Composition and Communication 61*(2), 212–242.

Donahue, C. (2010). Évolution des pratiques et des discours sur l'écrit a l'universite: Étude de cas [Evolution of practices and discourses about university writing: Case study]. *LIDIL: Revue de Linguistique et de Didactique des Langues, 41*, 137–160.

Donahue, C. (2012). Transfer, portability, generalization: (How) does composition expertise "carry"? In K. Ritter & P. Matsuda (Eds.), *Exploring composition studies: Sites, issues, and perspectives* (pp. 145–166). Logan, UT: Utah State University Press.

Driscoll, D. L. & Wells, J. (2012). Beyond knowledge and skills: Writing transfer and the role of student dispositions. *Composition Forum, 26*. Retrieved from http://compositionforum.com/issue/26/beyond-knowledge-skills.php.

Elon Statement on Writing Transfer. (2015). Retrieved from http://www.centerforengagedlearning.org/elon-statement-on-writing-transfer/.

Engeström, Y. (2001). Expansive learning at work: Toward an activity theoretical reconceptualization. *Journal of Education and Work, 14*(1), 133–156.

Foertsch, J. (1995). Where cognitive psychology applies: How theories about memory and transfer can influence composition pedagogy. *Written Communication, 12*(3), 360–383.

François, F. (1998). *Le discours et ses entours* [Discourse and its surroundings]. Paris, FR: L'Harmattan.

Gagné, R. (1985). *The conditions of learning and theory of instruction*. New York: CBS College.

Guibert, R. (2004). Formation aux dialogismes [Formation for dialogisms]. *Pratiques*, *121*, 28–44.

Haskell, R. E. (2000). *Transfer of learning: Cognition, instruction, and reasoning*. San Diego, CA: Academic.

Hatano, G. & Greeno, J. G. (1999). Commentary: Alternative perspectives on transfer and transfer studies. *Educational Research*, *31*(7), 645–654.

Heidrick, I. (2006). Beyond the L2: How is transfer affected by multilingualism? *Columbia University Working Papers in TESOL and Applied Linguistics*, *6*(1), 1–3.

Hilaricus, J. R. (2011, April). *Toward a sociomaterial approach to knowledge transfer*. Paper presented at the meeting of the International Conference for Organizational Learning, Knowledge and Capabilities (OLKC), Kingston upon Hull, UK.

Horner, B., NeCamp, S. & Donahue, C. (2011). Toward a multilingual composition scholarship: From English only to a translingual norm. *College Composition and Communication*, *63*(2), 269–300.

Ito, F. (2009). Threshold to transfer writing skills from L1 to L2. Retrieved from http://files.eric.ed.gov/fulltext/ED506378.pdf.

Ivanič, R. (1998). *Writing and identity: The discoursal construction of identity in academic writing*. Amsterdam, NL: John Benjamins.

Kara, M. (2004). Reformulation et polyphonie [Reformulation and polyphony]. *Pratiques*, *123/124*, 27–53.

Kogut, B. & Zander, U. (1995). Knowledge and the speed of transfer and imitation of organisational capabilities: An empirical test. *Organisation Science*, *6*(1), 76–92.

Kumashiro, K. (2004). *Against common sense: Teaching and learning towards social justice*. New York: Routledge.

Lave, J. (1988). *Cognition in practice: Mind, mathematics, and culture in everyday life*. New York: Cambridge University Press.

Lave, J. (1991). Situating learning in communities of practice. In L. Resnick, J. Levine & S. Teasley (Eds.), *Perspectives on socially shared cognition* (pp. 63–82). Washington, DC: APA.

Lave, J. & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge, UK: Cambridge University Press.

Le Boterf, G. (1994). *De la competence: Essai sur un attracteur étrange* [About competency: Essay on a strange attractor]. Paris, FR: Editions D'Organisation.

Lillis, T. M. (2001). *Student writing: Access, regulation, desire*. New York: Routledge.

Lillis, T. & Rai, L. (2012). Quelle relation entre l'écrit academique et l'écrit professionnel? Une étude de cas dans le domaine du travail social [What relationship between academic and professional writing? A case study in social work]. *Pratiques*, *153*(4), 51–70.

Meirieu, P. (1994). *Apprendre . . . oui, mais comment?* [Learn . . . yes, but how?]. Paris, FR: ESF.

Meirieu, P. & Develay, M. (1996). Le transfert de compétences analysé a travers la formation de professionnels [Transfer of competencies analyzed through professional training]. In P. Meirieu, M. Develay, C. Durand & Y. Mariani (Eds.), *Le concept de transfert de connaissances en formation initiale et en formation continue* [The concept of knowledge transfer in initial and ongoing education] (pp. 31–46). Lyon, FR: CRDP.

Meyer, J. & Land, R. (2003). Threshold concepts and troublesome knowledge: Linkages to ways of thinking and practising within the disciplines. *Enhancing Teaching-Learning (ETL) Project Occasional Report, No. 4*. Retrieved from http://www.etl.tla.ed.ac.uk//docs/ETLreport4.pdf.

Moore, J. L. (2012). Mapping the questions: The state of writing-related transfer research. *Composition Forum*, *26*. Retrieved from http://compositionforum.com/issue/26/map-questions-transfer-research.php.

Nelms, G. & Dively, R. L. (2007). Perceived roadblocks to transferring knowledge from first-year composition to writing-intensive major courses: A pilot study. *WPA: Writing Program Administration*, *31*(1–2), 214–240.

Nowacek, R. S. (2011). *Agents of integration: Understanding transfer as a rhetorical act*. Carbondale, IL: Southern Illinois University Press.

Paré, A., Dias, P. & Farr, M. (Eds.). (2000). *Transitions: Writing in academic and workplace settings*. New York: Hampton Press.

Perkins, D. (2006). Constructivism and troublesome knowledge. In J. Meyer & R. Land (Eds.), *Overcoming barriers to student understanding: Threshold concepts and troublesome knowledge* (pp. 33–47). London: Routledge.

Perkins, D. N. & Salomon, G. (1992). The science and art of transfer. In A. L. Costa, J. A. Bellanca & R. Fogarty (Eds.), *If minds matter: A foreword to the future* (Vol. 1) (pp. 201–210). Palatine, IL: IRI/Skylight.

Perkins, D. N. & Salomon, G. (2007). *The science and art of transfer*. Harvard University Learnweb. Retrieved from https://learnweb.harvard.edu/alps/thinking/docs/trancost.pdf.

Perrenoud, P. (1999a). Construire des compétences, est-ce tourner le dos aux savoirs [Does constructing competencies mean turning one's back on knowledges?]. *Pédagogie Collégiale*, *12*(3), 14–17.

Perrenoud, P. (1999b). Transférer ou mobiliser ses connaissances? D'une metaphore l'autre: Implications sociologiques et pedagogiques [Transferring or mobilizing knowledge? From one metaphor to another: Sociological and pedagogical implications]. Retrieved from http://www.unige.ch/fapse/SSE/teachers/perrenoud/php_main/php_1999/1999_28.html.

Perrenoud, P. (2000). D'une métaphore l'autre: transférer ou mobiliser ses connaissances? [From one metaphor to another: Transferring or mobilizing knowledge?]. In J. Dolz & E. Ollagnier (Eds.), *L'énigme de la compétence en éducation* [The enigma of 'competence' in education] (pp. 45–60). Brussels, BE: De Boeck.

Reuter, Y. (2004). Analyser les problèmes de l'écriture de recherche en formation [Analyzing writing research problems in training]. *Pratiques*, *121/122*, 9–27.

Reuter, Y. (2006). À propos des usages de Goody en didactique. Éléments d'analyse et de discussion [About using Goody in didactics. Elements of analysis and discussion]. *Pratiques*, *131*(132), 131–154.

Rinck, F. (2006). Gestion de la polyphonie et figure de l'auteur dans les parties théoriques de rapports de stage [Managing polyphony and authorial figures in the theory section of internship reports]. *LIDIL: Revue de Linguistique et de Didactique des Langues*, *34*, 85–103.

Rinck, F. & Sitri, F. (2012). Pour une formation linguistique aux écrits professionnels [In support of linguistic formation for professional writing]. *Pratiques*, *153/154*, 71–84.

Russell, D. (1995). Activity theory and its implications for writing instruction. In J. Petraglia (Ed.), *Reconceiving writing, rethinking writing instruction* (pp. 51–78). London: Routledge.

Salomon, G. & Perkins, D. N. (1989). Rocky roads to transfer: Rethinking mechanisms of a neglected phenomenon. *Educational Psychologist*, *24*(2), 113–142.

Samson, G. (2002). Le transfert a-t-il un avenir dans l'apprentissage et l'enseignement? [Does transfer have a future in learning and teaching?]. *Cahiers Pédagogiques*, *408*. Retrieved from http://www.cahiers-pedagogiques.com/Le-transfert-a-t-il-un-avenir-dans-l-apprentissage-et-l-enseignement.

Scott, M. (2013). From error to multimodal semiosis: Reading student writing differently. In M. Böck & N. Pachler (Eds.), *Multimodality and social semiosis: Communication, meaning-making, and learning in the work of Gunther Kress* (pp. 195–203). New York: Routledge.

Serres, M. (1974). *La traduction* [Translation]. Paris, FR: Les Editions de Minuit.

Sparks, R., Patton, J., Ganschow, L. & Humbach, N. (2009). Long-term crosslinguistic transfer of skills from L1 to L2. *Language Learning*, *59*(1), 203–243.

Street, B., Lea, M, Russell, D., Parker, J. & Donahue, C. (2009). Exploring notions of genre in "academic literacies" and "writing across the curriculum": Approaches across countries and contexts. In C. Bazerman, A. Bonini & D. Figueredo (Eds.), *Genre in a Changing World*. Fort Collins, CO: WAC Clearinghouse/Parlor Press. Available at http://wac.colostate.edu/books/genre/.

Tardif, J. & Meirieu, P. (1996). Stratégie pour favoriser le transfert des connaissances [Strategy for fostering knowledge transfer]. *Vie Pédagogique*, *98*(7), 4–7.

Teece, D. J. R., Rumelt, G. & Winter, S. (1994). Understanding corporate coherence. *Journal of Economic Behavior and Organization*, *23*, 1–30.

Tuomi-Gröhn, T. & Engeström, Y. (2003). Conceptualizing transfer: From standard notions to developmental perspectives. In T. Tuomi-Gröhn & Y. Engeström (Eds.), *Between school and work: New perspectives on transfer and boundary-crossing* (pp. 19–38). Amsterdam, NL: Pergamon.

University of Montreal. (2013). Le transfert de connaissances [The transfer of knowledge]. Retrieved from http://www.recherche.umontreal.ca/valorisation-de-la-recherche/le-transfert-de-connaissances.

Vygotsky, L. S. (2012). *Thought and language*. Cambridge, MA: Massachusetts Institute of Technology.

Wardle, E. (2007). Understanding transfer from FYC: Preliminary results of a longitudinal study. *WPA: Writing Program Administration*, *31*(1–2), 65–85.

Wardle, E., Roozen, K. & Casillas, S. (2013, June). *Transfer and the work of identity: Considering the role of social identity in moments of critical transition*. Paper presented at the meeting of Elon University Research Seminar on Critical Transitions: Writing and the Question of Transfer, Elon, NC.

Wenger-Trayner, E. & Wenger-Trayner, B. (2014). *Complex landscapes and systems convening*. New York: Routledge.

Wolfersberger, M. (2003). L1 to L2 writing process and strategy transfer: A look at lower proficiency writers. *TESL-EJ*, *7*(2), 1–12.

Young, M., Tuomi-Gröhn, T. & Engeström, Y. (2003). From transfer to boundary-crossing between school and work as a tool for developing vocational education: An introduction. In T. Tuomi-Gröhn & Y. Engeström (Eds.), *Between school and work: New perspectives on transfer and boundary-crossing* (pp. 1–19). Amsterdam, NL: Pergamon.