

The Spatial Metaphors of Transfer

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Abstract: While *transfer* remains the dominant yet controversial metaphor for describing how learning from one context affects learning in another, writing scholars propose numerous alternatives better aligned with current models of learning in *consequential transitions*, *boundary crossing*, and *threshold concepts*; however, each shares a pervasive epistemic constraint: a systematic metaphor that frames transfer as *transportation*. Drawing on Lakoff and Johnsen, I identify four dimensions of spatiality as *transfer's* experiential bases: physical, technological, social, and temporal. I argue that *transfer* entails metrics of distance biased towards unilateral transitions and traditional educational trajectories, and it objectifies learning, perpetuating outmoded theories of language, mind, and transfer. I support calls to replace *transfer* with a more generative metaphor, turning needed attention to pragmatic issues of uptake and circulation. However, contending that terminological change is not enough to mitigate its entailments, I propose conventionalizing mindfulness of the metaphor via existing processes and practices of disciplinary enculturation.

Introduction

Since the late 1980s, writing scholars have studied how learning from one context affects learning in another, relying on metaphors to conceptualize the cognitive and social processes involved. Metaphors are beneficial and perhaps even necessary for making sense of abstract phenomena, but they also risk influencing our thinking in subtle ways. While *metaphor* commonly denotes a literary device used to describe in figurative rather than literal terms, often expressed in the form A is B (e.g., first-year students are fish out of water), language scholars broaden the term to incorporate simile, metonymy, and other figurative devices that use a source domain to characterize a target domain. (When Big Mama Thornton sings, “you ain’t nothing but a hound dog,” for example, the source (“hound dog”) characterizes the target (“you”) as overeagerly following the narrator around.) In cognitive linguistics, moreover, metaphor refers to understanding one idea in terms of another, crucially acknowledging metaphor as operating in both language and thought.

At its root, *metaphor* means to carry over, but when drawing from source domains to understand abstract targets, we often carry over much more than we realize. For example, we perceive greater risk in climate change when it’s framed as a war rather than a race (Flusberg et al.). We prioritize aggressive treatment over preventative behaviors when cancer diagnoses are framed as a battle (Hauser and Schwarz). We’re nudged towards either social reform or enforcement when crime is framed as a virus or a beast, respectively (Thibodeau and Boroditsky). In such cases, we associate the target with not only intended traits of the source (e.g., risk and exigency), but also tacit implications (e.g., the best course of action). If crime is a virus, it should be treated; if a beast, it should be caged. Thus, metaphor is not merely a teaching tool or literary flourish; rather, it’s an epistemic powerhouse capable of shaping how we think and behave.

Of course, writing scholars are highly attendant to such rhetorical forces, including the consequences of spatial metaphors. Most criticism of spatiality in writing studies is performed routinely, albeit diffusely, by myriad scholars each targeting specific specimens—a forest measured by dissection of its trees. Still, the

numerousness of spatial metaphors hasn't escaped critical attention. Reynolds finds geographic concepts such as *frontiers*, *cities*, and *cyberspace* woven into the discipline's professional and cultural development, while Reiff connects several specimens in rhetorical genre studies (*sites*, *locations*, *ecosystems*, *habitats*, *structures*, *formations*, *positioning*, *navigation*, and *access*) to the "spatial turn" in writing studies (27–35; 207–208; see also Dryer). Scholars range from skepticism to enthusiastic support for our spatializing habit, but they overlap in prescribing discernment and moderation. Reynolds, for example, cautions against metaphors dominating to the exclusion of materiality, yet appreciates their productive potential for theory (27–35). Similarly, Alexander et al. criticize spatiality in *worlds apart*, *literacy in the wild*, and *ecologies*, but they embrace it in proposing *wayfinding*, which better accounts for writers' lived experiences (108–123). Thus, consensus holds that while token metaphors can be misleading (some more than others), spatial metaphors as a type prove generative for knowledge practices when selected carefully, used mindfully, and balanced with materiality.

Major theoretical turns in writing transfer theory have consequently been driven by scholars criticizing some metaphors (particularly *transfer* and its related specimens) while simultaneously promoting others. In defense of this approach, prominent alternative metaphors are indeed more accordant with contemporary models of learning than predecessors inherited from cognitive transfer theory and elsewhere, thereby affording invaluable insights into the role of prior learning in writing; nevertheless, I find that each major theoretical terminology shares a pervasive, underlying systematic metaphor that frames learning continuity and change as *transportation*: spatial movement for the conveyance of persons and objects.

Token and type analyses have brought much-needed attention to transportation metaphors in our theoretical language; however, to understand their aggregate influence, we must contend with the conceptual system that produces them, digging up its tangled roots of circulatory logics and propagational economies to test the soil for epistemic contaminants. Lakoff and Johnsen model three methodological tasks for analyzing a systematic metaphor: expose its language system, identify its experiential bases, and evaluate its entailments and implications. To that end, this article (1) identifies over forty specimens in the contexts and concepts of writing transfer, (2) posits four spatial dimensions that experientially ground the systematic metaphor, and (3) analyzes two crucial entailments—intuitive notions of distance and objectification of learning—that subtly bias writing transfer research and theory.

To mitigate these entailments, I support calls to replace *transfer* with a metaphor more aligned with contemporary models of learning. Rather than devising a new metaphorical framework—the literature poses no shortage of preferable alternatives—this article instead turns needed attention to pragmatic issues of uptake and circulation, positing seven conditions necessary for terminological change: abstract processuality, hypernymy, availability, substitutability; conventionality; compatibility; and flexibility. However, contending that changing from one metaphor to another is not enough to disrupt the pervasive system analyzed in this article, I propose conventionalizing mindfulness of the metaphor via existing processes and practices of disciplinary enculturation.

Background

Introducing cognitive transfer theory from educational psychology to writing studies in the late 1980s, Salomon and Perkins distinguish between *low-road* triggering of a well-learned behavior in a new context and *high-road* willful and mindful abstraction and application of prior learning, defining similar and dissimilar contexts as *near* and *far*, respectively (113; Perkins and Salomon, "Transfer" 4). This framework has sparked valuable contributions to writing theory, research, and practice (see Fishman and Reiff's profile of First-Year Composition (FYC) at the University of Tennessee for a pedagogical example); however, it has also drawn criticism for oversimplifying the processes involved in the phenomenon it describes, leading scholars to propose numerous expansions, enhancements, and alternatives, including *threshold concepts*, *consequential transitions*, and *boundary crossing*.

Expanding on the cognitive dimensions of transfer, Meyer et al. define threshold concepts as those that enable comprehension of more advanced concepts, thereby scaffolding vertical transfer into disciplinary ways of thinking and knowing; for example, understanding geologic time and scale enable comprehension of processes in structural and metamorphic geology (ix–xlii; Stokes et al. 434). Meyer and Land contend that threshold concepts are transformative for learners’ perception and practice and are unlikely to be unlearned or forgotten; however, such concepts often exemplify what Perkins calls troublesome knowledge: ideas that are difficult to comprehend because they are conceptually complex, paradoxical, initially counterintuitive, and so on (“Threshold Concepts and Troublesome Knowledge: Linkages” 415; “The Many” 8–10; “Constructivism”; see also Adler-Kassner et al., “Value”).

Drawing on sociocultural models of learning and development, Beach proposes consequential transitions as an alternative theory to replace transfer altogether. Beach envisions learning continuity and change as an ongoing and recursive “relation between changing individuals and changing social contexts”—not only lateral transitions between activities, but also transitions between concurrent activities, changing activities, and simulation of anticipated contexts (“Consequential Transitions: A Sociocultural” 103–119). Potentially occurring within these dynamic interactions, consequential transition is the “conscious reflective struggle to reconstruct knowledge, skills, and identity” in ways that contribute to the individual becoming new and, in turn, changing the activity system and society (Beach, “Consequential Transitions: A Sociocultural” 130).

Informed by both sociocultural and activity-based models, Tuomi-Gröhn et al. propose boundary crossing as an enhanced conception of transfer (1–18). Inspired by Anzaldúa’s notion of invisible psychic and social borders that obscure intersecting identities and hybridized social worlds, *boundaries* denote sociocultural differences across which individuals must interact without sufficient comprehension or qualifications (Akkerman and Bakker 133; Suchman 25). Taking up Haraway’s epistemological stance that individual knowledges are embodied, situated, and partial, boundary crossing recognizes the diffuse networks of activities and actors who collectively construct activity systems, often aided by abstract or concrete *boundary objects* that inhabit multiple worlds, such as standard techniques, common referents, and other forms that bridge heterogeneous groups with different knowledges, motivations, and sociocultural affiliations (Suchman 25–29; Star and Griesemer 393–412).

Together, these theoretical turns have yielded invaluable insights into how learning works and spurred productive advances in writing theory and pedagogy. Since each relies extensively on geographic terms and orientational language to conceptualize how learning works, it’s clear the field has benefited significantly from the affordances of spatial metaphors and their role in the development of theory. Moreover, the primary metaphors employed within scholarship on consequential transitions and boundary crossing, such as the holistic and continuous process of *becoming*, have aided in comprehension and communication of complex ideas while maintaining compatibility with current educational models, which conceptualize learners as engaging in ongoing and mutually constructive interactions with dynamic contexts (Hager and Hodkinson 622–633). Nevertheless, such advancements also come at a cost. While scholars have made tremendous strides in dismantling *application* metaphors inherited from cognitive transfer theory, we continue to rely on geographic and orientational terms that emerge from and perpetuate the systematic spatial metaphor of transfer (hereafter SMT), which subtly influences our ways of thinking and communicating about learning continuity and change.

Analysis

In what follows, I investigate the systematic metaphor’s prevalence, origin, and impact; specifically, I analyze (1) SMT’s language system, (2) its experiential basis, and (3) its entailments and implications, positing the following crucial insights:

Section 1: SMT is supported by spatial language in multiple contexts that converge in writing transfer

research, including spatial metaphors used at the academic, multidisciplinary, disciplinary, and classroom levels and used in three major writing theories: rhetorical genre studies, activity theory, and situated learning.

Section 2: SMT is experientially based in four dimensions of writing contexts: physical, technological, social, and temporal.

Section 3: SMT entails intuitive distance between contexts, implicating (3.1.1) bias towards transfer across spatial dimensions and (3.1.2) bias towards traditionally-conceived educational trajectories. SMT also entails objectification of learning, implicating (3.2.1) mind and language as containers for meaning and (3.2.2) perpetuation of transfer as a unifying keyword and metaphor.

1. The Language System of SMT

Systematic metaphors occur when a concept and its metaphor so closely intertwine that the relationship affects our ways of thinking about the concept itself (Lakoff and Johnsen 10). These are not particular expressions, but rather conceptual frameworks that give rise to entire language systems, such as the varied terminology that frames arguments as buildings: sound/unsound, solid/shaky, founded/unfounded, supported/unsupported, and so on (Lakoff and Johnsen 10). This language system might not constrain the thinking of individuals, but it influences collective understanding by terminologically “screening” ideas for compatibility, selecting conceptions of arguments as uniform, monologic objects with fixed meaning while deflecting the roles of context and audience in shaping and co-constructing meaning (Burke 45). By similar screening functions, SMT subtly yet consistently shapes the underlying logics of our transfer concepts, facilitating uptake and expediting circulation of compatible language and ideas. Bolstered by spatial metaphors in several contextual tributaries, SMT manifests in terminologies used to describe writing, transfer, and cognition.

1.1 Contextual Tributaries

Transportation metaphors hide in plain sight, obscured by the prevalence of spatial terms in both the broad and narrow contexts of writing transfer theory and practice. SMT influences writing transfer research through several layers of linguistic, social, and professional contexts at the academic, multidisciplinary, disciplinary, and classroom levels.

At the academic level, spatial terms abound in formal education, including metaphors of area, movement, structure, distance, and height- and center-privileged hierarchies, which entered formal education as far back as the 16th century coinage of *curriculum* (“a course to be run”) (Paechter 465; Lawton 79; Hamilton 48–55). At the multidisciplinary level, the spatial turn—a movement characterized by the use of geographic terms in development of theory—infused broad areas of social and educational research with geographic terms, including writing theory and pedagogy (Massey 249–250; see also Dryer; Reiff). At the disciplinary level, frontier imagery has played a central role in the professionalization of writing instruction, popularized by Shaughnessy’s trailblazing map to the “pedagogical west” and evident in the cartographic framing of transfer studies (e.g., surveying the expansion-era US; building our “conceptual typography;” “mapping the territory;” charting the “landscape of the prior”) (Reynolds 29–31; Moore; Qualley 69; Beach, “Consequential Transitions: A Sociocultural” 104; Adler-Kassner et al., “Assembling” 38). Finally, at the classroom level, students and instructors systematically use containment metaphors—in/out orientations for texts and their qualities (e.g., include citations *in* your paper; this essay is *filled* with errors)—to communicate about writing (Bowden 373).

Moreover, writing scholars draw primarily on rhetorical genre studies, activity theory, and situated learning as paradigmatic foundations for developing theories of writing transfer (Brent 416). Each of these theoretical

areas employs myriad spatial terms to discuss learning and writing. In rhetorical genre studies, while scholars often cite Miller's definition of genre as typified and situated "rhetorical *action*," they variously metaphorize genres as objects (e.g., the writer "*carries... genres acquired*"), locations (e.g., "all genres function as... *sites of action*"), or both (e.g., see Bazerman's purposeful blending of these notions) (Miller 152; emphasis added; Devitt 220; emphasis added; Bawarshi 19; emphasis added; Bazerman 19–24). Activity theorists promote social process metaphors such as *enculturation*, but nevertheless employ sentence-level prose that treats multi-site activity systems as unified conceptual spaces in which writers locate themselves (e.g., disciplines are "specific activity system[s] ... *where academic work happens*") (Moore and Anson 7; Russell 63; emphasis added). Similarly, in situated learning theory, while scholars emphasize social aspects of learning situations, they nevertheless spatialize both situations and processes, evidenced respectively by metaphorizing distributed social and cognitive factors as a "[conceptual] *environment*" and pedagogically targeting a "*zone of proximal development*" denoting a lag between initiation and completion of developmental processes (Catalano 653; emphasis added; Vygotsky 84–91; emphasis added; see also Freedman and Adam 398). Significantly, while each of these theoretical projects explicitly refute educational models founded on transportation metaphors and have made crucial breakthroughs to that end, the prevalence of such examples indicates just how deeply our theoretical discourse remains infused with spatial terms.

1.2 Terminological Manifestations

Rendered less noticeable by these overlapping contexts, SMT shapes the language system we use to conceptualize processes of learning continuity and change, manifesting in our descriptions of writing contexts and experiences, types of transfer, and cognitive resources.

1.2.1. Writing Contexts and Experiences

Study titles through the decades paint writing contexts as landscapes, particularly ethnographies of students writing in the disciplines (e.g., McCarthy's "A Stranger in Strange Lands") and transitioning to workplaces (e.g., Beaufort's *Writing in the Real World*; Dias et al.'s *Worlds Apart*). Within these landscapes, individual writers become metaphorized as engaged in *travel* within and between conceptual domains (Bazerman 19). In their travels, writers navigate an array of factors metaphorized in spatial terms: conceptual locations such as *boundaries*, *territories*, and *communicative domains* (Tuomi-Gröhn et al. 4; Bazerman 19); epistemic passageways such as *gateways*, *portals*, and *zones* between old and new concepts (Meyer et al. ix; Meyer and Land, "Threshold Concepts and Troublesome Knowledge: Linkages" 412; Anson and Moore 6); obstacles to learning such as *roadblocks* and *stuck places* (Nelms and Dively 214–230; Meyer et al. ix–xi); and navigational experiences such as *orientation*, *disorientation*, and *wayfinding* (Donahue, "Transfer" 162; Anson and Forsberg 211–218; Alexander et al. 106).

1.2.2. Types of Transfer

Often described as occurring within and between metaphorical locations, social and cognitive processes are metaphorically oriented by proximity (e.g., legitimate *peripheral* participation) or directionality, as in paired terms for prior and subsequent learning (*backward-reaching* and *forward-reaching*), contextual similarity and dissimilarity (*near* and *far*), degrees of metacognitive effort (*low-road* and *high-road*), foundational or adjacent relationships between prior and subsequent learning (*vertical* and *lateral*), and temporal distinction or simultaneity of contexts (*lateral* and *collateral* transitions) (Lave and Wenger 29–43; Qualley 70; Perkins and Salomon, "Transfer" 4; Salomon and Perkins 25; Teich 193; Beach, "Consequential Transitions: A Sociocultural" 103–119).

1.2.3. Cognitive Resources

When describing processes spatially, writers' cognitive resources—prior knowledge, skills, experiences, memories, propositional attitudes, and other products of learning—are frequently depicted as objects to be moved between and applied in contexts. Sometimes, objectification is made explicit, as in Yancey et al.'s aptly titled report, “The Things They Carried,” or in scholarship criticized by Donahue for locating transfer in “the individual who carries knowledge” (“Writing” 109; see also Donahue, “Transfer”). More often, however, objectification is implicit within common terms denoting writers' engagement with prior learning. Prominent among them, *transfer* has long drawn criticism for treating individual learners as carriers of transcendent prior knowledge straightforwardly or mechanically applied across static contexts (Anson 544; Beach, “Consequential Transitions: A Sociocultural” 109–111; Wardle 66–69; Yancey et al., *Writing* 7–8). While scholars employ several alternatives more evocative of cognitive processes (e.g., *generalization*) or social processes (e.g., *integration*), such alternatives remain susceptible to cognitive objectification when combined with in/out prepositions, objectifying verbs, and other metaphorical language (e.g., writers *acquire* knowledge and integrate it *into* new contexts) (Beach, “Consequential Transitions: A Developmental” 40; Nowacek 8). Thus, even as more promising alternatives (discussed in a later section) gain traction, our spatial ways of thinking about learning, systematically manifested in the metaphors above and numerous others—*thresholds*, *boundaries*, *boundary objects*, *movement*, *obstacles*, *territories*, *sites*, *worlds*, and so on—prove fertile ground for propagating the selfsame implications these terminologies are intended to dismantle.

2. The Experiential Basis of SMT

Oriental metaphors like SMT arrange entire sets of concepts according to their perceived relationships in spatial orientation: up-down, high-low, near-far, and so on. Lakoff and Johnson theorize that these arrangements are not arbitrary, but rather grounded in our embodied experiences; for example, the metaphor “more is up” (e.g., “the number of books printed each year keeps going *up*”) comes from the experiential basis of stacking or piling objects, causing the height of the collection to increase (14–16; emphasis original). Identifying a metaphor's experiential basis helps to distinguish between the arrangement assumed by the metaphor and the actual relationships between concepts in the set. Taking up this charge, I find that SMT emerges from our embodied encounters with writing contexts; specifically, I propose four dimensions of spatiality as experiential bases: physical, technological, social, and temporal.

2.1 Physical Space

First, and most obviously, writing contexts coincide with movements in physical space (i.e., geolocational changes). Students come from high schools across cities, states, and countries to occupy seats in FYC. They write for chemistry, history, and economics in other classrooms and buildings. Many graduate to workplaces requiring writing tasks. Writers habituate composing spaces, and some dedicate tangible spaces to particular contexts: reports at an office desk, poems in a coffee shop, personal notes at a kitchen table, journal entries sitting up in bed, and so on. Notably, while some aspects of writers' bodies and material conditions remain under-acknowledged (see Owens and Van Ittersum's discussion of writing pain), scholars have attended productively to writing as an embodied practice (e.g., Haas and Witte; Sauer).

2.2 Technological Space

Secondly, writing contexts involve technological space, traversing tools, media, and virtual locations. Writers compose on laptops, smartphones, spiral-bound notebooks, napkins, and textiles; they use keyboards, markers, chisels, spray paint, and skywriting airplanes; they publish on social media apps, fan-fiction sites, text message threads, learning management systems, and countless other digital spaces. Tangible and virtual environments prompt similar cognitive effects, such as the location updating effect that occurs when passing through doorways causes forgetting (Radvansky et al.). Some students associate writing with specific tools and processes to the point of being unsure if most kinds of digital composing even count *as* writing—a

narrow definition that inhibits transfer between technological contexts (Shepherd 105–106).

2.3 Social Space

Thirdly, writing contexts involve social spaces. Writers perceive separate groups of friends, family, classmates, coworkers, strangers in comments threads, and others as occupying or comprising separate ‘spheres,’ many corresponding to geolocational or virtual spaces. This manifests in common expressions; for example, we describe interactions between people we know from different social spaces as worlds colliding, or metonymically substitute places for people (e.g., saying I’ve emailed the dean’s office even when aware that the recipient is working from home). We divide activities into spatially conceived *domains*, from broad categories like education, industry, and government to academic disciplines or *areas* of specialization. We perceive ourselves within socially-constructed communities cohered around shared identity traits or interests. Such notions of socio-spatial dimensionality inform scholarship on activity systems, knowledge domains, discourse communities, and genres.

2.4 Temporal Space

Finally, temporal space shapes writing contexts in crucial ways. Writing, like learning, is necessarily spatiotemporal, denoting changes from emplaced prior conditions to subsequent conditions. Time is a spatial phenomenon, but we perceive ourselves variously as moving through space (“*we are* coming up on the weekend”) or standing still while time moves around us (“*the weekend* will be here soon”), and time’s orientation differs across and within languages as ahead-behind, forward-back, up-down, or left-right (Boroditsky, “Metaphoric” 5; “Does” 4–5). Rhetoricians have attended to spatiotemporality since the field’s classical roots, from the revived concept of *kairos*—an archery metaphor signifying timeliness for action—to forensic, epideictic, and deliberative genres, which Fahnestock describes as dealing with the past, present, and future, respectively (277–279).

Since writing contexts, and therefore writing transfer, necessarily involve navigating physical, technological, social, and temporal space, these intertwining dimensions experientially ground SMT, thereby enabling its systematicity. Despite being experientially grounded, however, our metaphorical arrangements of concepts can be misleading, obscuring the complex variables and dynamic interactions that constitute writing contexts.

3. Entailments and Implications of SMT

SMT promotes problematic assumptions, subtly directing our attention to some aspects of transfer while obscuring others, potentially with theoretical and pedagogical consequences. For the sake of this analysis, *entailments* denote secondary metaphorical traits carried over from the source and evident in our language, whereas *implications* denote unarticulated assumptions or sentiments based on those traits, which subtly influence shared conceptions.

Of course, entailments and implications of metaphorical frameworks are carefully addressed by the individuals proposing them. For example, Meyer et al.’s vivid threshold metaphor—“passing through a portal ... [to] a new and previously inaccessible way of thinking”—requires extensive clarification about the “degree of recursiveness and oscillation” involved despite the implications of simplicity and instantaneity of passing through doorways, which they combat with a different spatial metaphor: a *stuck place* of partial understanding (ix–xi; see also Meyer and Land, “Threshold Concepts and Troublesome Knowledge: Issues”). Independent of these qualifications, however, the central metaphor subtly interferes with communication of the very processes it aims to describe, which are characterized in part by their troublesomeness. Given the diverse citation practices of academic disciplines, one can expect an influential theory, its terminology, and its metaphors to circulate in condensed and mediated forms (e.g., brief paraphrases in tangential research areas;

translated for readers versed in other disciplinary vocabularies and conventions) or—regrettably—in diluted or distorted forms (e.g., half heard or misremembered by conference attendees; cited based on partial or shallow readings; inaccessibly articulated in graduate seminars or to readers outside the intended discipline).

Greater circulation affords more numerous opportunities for misunderstandings to occur, yet the frequency and longevity of an idea's circulation tends to be inversely correlated with the level of contextualizing detail included in its usage, as writers presume with greater confidence that readers will have sufficient prior knowledge of the concept. Considering the range of educators across disciplines and professions who engage with writing theory and research, some readers unaware of a concept's qualifications—and unaware that they are unaware—may be influenced by the concept and its unacknowledged implications when making pedagogical choices. In a theoretical sense, analogous to the processes described by Suchman regarding technology systems, these unacknowledged implications become part of the different partial knowledges of diffuse networks of actors and actions that collectively construct writing instruction as an activity system. In a practical sense, if taken up by school board members, school administrators, legislators, representatives of standardized testing agencies, or other stakeholders in educational and non-educational roles, a seemingly subtle implication (e.g., that comprehension of threshold concepts can be achieved quickly) might influence decisions that impact teachers and students: teaching loads, course seating caps, time dedicated to key concepts in curriculum maps, expectations set for student outcomes on assessments, or other factors at various levels of policy and practice. Thus, metaphorical implications can lead to material consequences.

In the following subsections, I identify two entailments of SMT: (3.1) notions of distance between contexts, with implications for our research priorities, and (3.2) notions of learning as objects, with implications for our tacit theories of language, mind, and transfer.

3.1 Entailment: Notions of Distance Between Contexts

Modeling their influential cognitive transfer framework, Perkins and Salomon theorize that car drivers engage in *near transfer* to drive large trucks, *far transfer* to operate vehicles with knobs or levers in place of a steering wheel, and “ordinary learning” (no transfer required) between mechanically similar vehicles (“Teaching” 22). They're unsure, however, whether switching cars from manual to automatic transmission is “different enough” to necessitate transfer (“Teaching” 22). They intend this framework to “broadly characteriz[e] some aspects of transfer” while resisting any strict or precise “metric[s] of ‘closeness’,” conceding that it leaves a “fuzzy border” between categories (“Transfer” 4; “Teaching” 22). Without codifying principles, the distinctions between far transfer, near transfer, and ordinary learning depend on the guidance of intuition.

Despite operating in loose, binary terms, such orientational arrangements for contexts suggests a spectrum of distance. Although both cases would be categorized as far transfer in a near/far binary, for example, it intuitively follows that car drivers must transfer their knowledge *farther* to piloting jets than to driving trucks, signaling finer gradations of distance between the source context and the target context. This entailment may be innocuous when studying tactile problem-solving contexts like motor vehicle operation; however, given the complexly situated nature of writing contexts, the categorical borders become even fuzzier and shades of closeness harder to define. By characterizing learners as traveling between contexts, SMT helps intuition along by giving it a path of least resistance: distance.

SMT systematically arranges contexts by intuitive distance, gauged by degrees of similarity and dissimilarity of physical, technological, social, and temporal location, thereby directing attention to cases involving more locationally distinct contexts and deflecting attention from other cases potentially generative for research. Specifically, this entailment poses two implications: (3.1.1) bias towards transfer across spatial dimensions and (3.1.2) bias towards traditionally conceived educational trajectories.

3.1.1 Implication: Bias Towards Transfer Across Spatial Dimensions

Intuitively, college-to-workplace transfer seems farther than course-to-course transfer, which in turn seems farther than assignment-to-assignment distances within a single course. Modeling these assumptions, our paradigmatic cases emphasize *critical transitions*, referring to unidirectional advancement between geographically distinct contexts: from high school to FYC, from FYC to other courses, and from college to the workplace (Moore and Anson 3). These cases, which Beach would characterize as *lateral transitions*, are indeed critical for our students and therefore deserving of attention (“Consequential Transitions: A Sociocultural” 114–115). Moreover, the pressure to defend general-education courses to external stakeholders presents a clear exigence for documenting FYC’s impact on our students’ educational and career outcomes (Adler-Kassner et al., “Value”). While these assumptions are grounded in our research (e.g., Anson and Forsberg; Beaufort) and have informed key advancements in writing theories, they are not readily generalizable.

Distance categories fail to account for embodied experiences of writing contexts. Moving between unfamiliar genres within an FYC course could, for some students, present a farther qualitative distance than moving between separate courses that assign familiar genres, despite the more apparent differences in the physical and social spaces of the latter scenario. Even prominent differences between activity systems or domains are not predictive of transfer-related challenges. My previous experience as a non-traditional student is illustrative here, as I found it straightforward to recall and engage strategies and concepts from FYC in a writing-intensive workplace, but struggled to re-enculturate to classroom genres when returning to college—a challenge shared by many returners from industry to academia (Peters et al.).

Secondly, spatial dimensions can converge or diverge independently of one another. A student starting a work-study job on campus enters an unfamiliar domain in a familiar location, whereas a student transferring to, or studying abroad at, another college with unfamiliar linguistic conventions enters a similar domain in an unfamiliar location. Multilingualism poses yet another variable of distance, given the difficulties of adapting rhetorical strategies and writing skills into a second language (Kubota). In disciplines concerned with second or third language acquisition and instruction, scholars advance rich, nuanced theories and studies of prior learning engagement; however, these theories remain largely overlooked in writing studies (Donahue, “Writing” 118–120). Moreover, while multilingualism is the norm for most human beings, language research suffers from a longstanding bias towards monolingualism (Cook 578).

In practice, the spatiotemporal variables in writing contexts prove too unwieldy for intuition. Even when focusing solely on critical transitions, closer inspection reveals as many transfer distances as permutations of writers and writing contexts, which complicates categorization even for a loose, binary arrangement of near and far. Nevertheless, notions of distance entailed by SMT divert attention from these subtle and spatially counterintuitive realities. For the sake of illustration, this paragraph shares the same time-tested sofa cushion, laptop, and word processor on which many other kinds of composing take place: manuscripts and proposals; syllabi and handouts; professional documents and application materials; legal documents; self-sponsored literary writing; personal correspondence—a broad range of literate activities messily overlapping and diverging in respects to these spatial dimensions.

Yet two texts composed within similar physical, technological, social, and temporal categories can vary considerably by genre, style, exigence, purpose, audience, composing processes, rhetorical strategies, multimodal features, and countless other contextual factors likely requiring transfer. Even a single text can disrupt assumptions that transfer requires locationally distinct contexts; for example, replying to a student who raised two concerns—asking a content question and registering a grade complaint—engages different threads of prior learning and experience ranging from one-on-one pedagogical practices to conflict resolution in the process of composing a single email. These contextual factors, while central to broader areas of inquiry in writing studies, are often overshadowed in transfer research by more apparent transitions between spatial

dimensions.

3.1.2 Implication: Bias Towards Traditionally Conceived Educational Trajectories

Notions of distance between contexts tend toward unidirectionality, framing critical transitions as discrete events in a prescribed sequence: high school to FYC to other courses to the workplace. Consequently, such notions obscure highly interesting and theoretically important cases that don't follow this sequence, such as non-traditional students entering (or re-entering) college from the workforce or military service, or students concurrently employed or enlisted while enrolled in classes—an ever-increasing reality, especially in two-year colleges. Working learners outnumber others by far: seventy percent of college students work while enrolled, forty percent at a minimum of thirty hours per week, and a quarter are employed full-time (Carnevale et al. 10–11). Even without attending to cases outside of higher education, these findings profile a complex population interacting and communicating in both education and workforce domains at once, routinely engaging in concurrent transfer or *collateral transitions*, to use Beach's term ("Consequential Transitions: A Sociocultural" 115–117). Thus, despite our research emphasis on linearity, college students move within and between critical transitions recursively rather than discretely and follow multiple trajectories.

Fortunately, scholars have turned much-needed attention to investigating concurrent writing contexts, such as students' academic writing and simultaneous self-sponsored and workplace writing, finding that these contexts and their simultaneity form layers of the complex backgrounds involved in learning continuity and change (Yancey et al., *Writing* 20–28; see also Yancey et al. "Writing"). As frequent settings for writing research and pilot curricula, FYC courses afford rich opportunities for exploring such cases, thereby refining our scope of inquiry independent of the arrangement implicated by notions of distance.

3.2 Entailment: Objectification of Learning

Objectification occurs when learning is framed or conceptualized as the act of accruing correct answers or skill-substances that exist outside the learner and are independent of learning contexts (Hager and Hodkinson 622–635). While contemporary models of education refute this conception, manifestations of SMT often entail outcomes of learning (knowledge, skills, ideas, experiences, etc.) as objects to be acquired in one context and applied in others. Some manifestations are overt, such as *transfer* and its associated *application* metaphor. Alternatives such as *becoming* and *boundary crossing* alleviate some assumptions about mind and learning by focusing on processes of *transformation*; nevertheless, they still objectify learning insofar as they characterize learners as transporting *things* with them to new spaces, such as *boundary objects* (in some uses), or genre knowledge to *break down* and *repurpose*, or other abstracted products of learning to *remix* or *assemble* in and for new writing contexts (Tuomi-Gröhn et al. 4; Reiff and Bawarshi 314–325; Robertson et al.; Adler-Kassner et al., "Assembling" 39).

The objectification of learning implicates two paradigms that inhibit collective understandings of the phenomenon under study: (3.2.1) language and mind as containers, and (3.2.2) perpetuation of transfer as a unifying term.

3.2.2 Implication: Language and Mind as Containers

SMT implicates the ontological proposition that knowledge is wholly separable from embodied learners and situated contexts; consequently, its systematicity reinforces (and is reinforced by) tacit yet influential theories of language and mind: the conduit metaphor and folk theory of mind, respectively. The conduit metaphor depicts speakers as putting idea-objects into word-containers to be unpacked by receivers, thereby deflecting attention from the situated nature of communication and the role of audiences in co-constructing meaning

(Reddy 164–201; Lakoff and Johnsen 10–12). Similarly, the folk theory of mind depicts the mind as a container for things such as experiences, memories, thoughts, skills, and so forth, thereby deflecting attention from learning as a participatory, social construction shaped by and changing with learning contexts (Bereiter 13–17; Hager and Hodkinson 622–635).

Together, the conduit metaphor and folk theory of mind constitute an ontology of learning and language that has shaped higher education, manifesting in current-traditional educational models like the “banking” approach long criticized for characterizing students as passive receptacles to be filled with contents deposited by experts (Freire 71–86). Despite overwhelming research supporting interactive pedagogies, this ontology of learning promotes unidirectional lecture and textbook reading as default practices and assumes students are solely to blame for learning failures due to insufficient attention or comprehension. This default is embedded in institutional policies (e.g., high course enrollment caps), hiring practices (e.g., job postings emphasizing content knowledge over teaching experience or merit), and even architecture (e.g., teacher-centered classroom design and arrangement). This ontology also underlies “diffusionist” models of communication that defer responsibility to engage with external publics, thereby exacerbating the divide between academic research and public opinion (Bucchi 57–73).

3.2.3 Implication: Perpetuation of *Transfer*

Against prominent and enduring criticism, *transfer* seems curiously immutable. Some scholars recognize it as an important (albeit imprecise) umbrella term for asserting multidisciplinary and historical ties to cognitive transfer theory, while others contend that writing-specific theories ought to—or already do—drive our research (Moore and Anson 11; Rounsaville; Brent 416). Most view *transfer* as a flawed-yet-convenient shorthand, tolerable until we reach an eventual and perhaps inevitable tipping point for terminological change, but others advocate eradicating the term and its conceptual influence from our research entirely (Beach, “Consequential Transitions: A Sociocultural” 110; Hager and Hodkinson). *Transfer* is not without champions; however, given widespread attitudes ranging from qualified appreciation at least to outright rejection at most, the term’s controversy remains in lockstep with its incumbency.

Opponents could, hypothetically, commit to their preferred alternatives rather than acquiescing to the use of *transfer*, especially since the field has long been negotiating multiple terminologies. In an activity system as attendant to rhetorical conventions as academic publishing and research, however, breaking from convention can prompt uptake challenges for scholarship undergoing processes of peer and editorial review. Such considerations may motivate authors—intrinsically or extrinsically, explicitly or implicitly, consciously or unconsciously—to employ conventionally accepted terms in titles, abstracts, and keyword tags while simultaneously qualifying and criticizing them in the body of a text.

Even so, given the prominence of competing keywords and metaphors and the resounding consensus across the field, why hasn’t a tipping point been reached? Conceptual terms often outlive their theoretical frameworks; however, if a subsequent generation of researchers finds a term too discordant with current understandings, its “survival value” decreases and its usage declines, making space for refinement of the prevailing paradigm (Dawkins 193; Kuhn, *The Structure* chs. 6–9). *Transfer*, in contrast, remains our default term despite decades of consensus across generations of scholars regarding its incongruity with our understanding of learning continuity and change—used even to denote the most explicitly anti-*transfer* theories (e.g., see Guile and Young’s approach to Beach in the same volume) (“Consequential Transitions: A Sociocultural”). Thus, keyword conventions alone can’t account for its survival.

I propose that SMT helps to explain why it persists. *Transfer* is organically well-suited to an SMT-screened terminological environment, able to propagate and spread despite scholarly attempts at artificial selection of more promising alternatives. SMT shapes the underlying language system shared by both *transfer* and its competitors; consequently, while the term’s many problems are well established, it nevertheless remains

compatible enough with our tacit metaphoric conception of the phenomenon to dampen its discord with current paradigms, thereby delaying the decrease of its survival value.

Mitigating SMT

Introducing studies from a three-year research seminar, Moore and Anson caution, “the varied terms... embedded in the learning and transfer theories underlying these studies all carry baggage” (11). As this analysis has shown, all these terms carry the *same* baggage: a systematic spatial metaphor that frames transfer as transportation of learning between contexts. This metaphor enters writing transfer scholarship through several layers of linguistic, social, and professional contexts, shaping the way we discuss writing contexts and experiences, types of transfer, and writers’ cognitive resources. Based on experiences of writing across physical, technological, social, and temporal spaces, this metaphor entails notions of distance between contexts and of learning as objects, with implications for our research priorities and our shared conceptions of language, mind, and learning.

Considering the ubiquity of figurative language in educational discourse—not only *transportation*, but also *computation* (see Kennedy) and *gardening* (see Mintz)—it’s clear that metaphors play an undeniable role in formulation and refinement of theory, as Kuhn contends, and may even be inextricable from our thinking about learning, as others have suggested (“Metaphor;” Alexander et al. 107; Hager and Hodkinson 621; Rodgers 575; Reynolds 43). Since ending our reliance on metaphor seems neither beneficial nor practicable, our response ought to presume—enthusiastically or begrudgingly—that spatial metaphors aren’t going anywhere.

Nevertheless, while further research is needed to address SMT and its conceptual influence, there are measures we can take in the meantime to mitigate its implications for our research on how prior learning impacts writing, including two steps considered in the following sections: (1) replacing *transfer* with a less problematic unifying verb and (2) conventionalizing mindfulness of SMT and its implications.

Step One: Replacing Transfer

The first step—replacing *transfer* with a less problematic metaphoric term—has long been advocated, either explicitly via proposed replacements or implicitly via the use of supplemental or alternative descriptors for the processes involved in learning continuity and change. However, while interventions have rightly targeted broad changes in our metaphors for learning and language, such efforts have seldom addressed mundane yet forceful linguistic factors driving the continued survival of *transfer*, particularly sentence-level factors involving our stock verbs and nouns. Consequently, among numerous preferable alternatives, none has achieved the level of consensus required to disrupt the entrenched circulation of *transfer*.

Definitional Stasis

What is preventing such disruption? While SMT enables *transfer* to survive despite its discord with current models of learning, this dynamic alone can’t account for the *lack* of uptake regarding other more accordant terms. The other piece of the puzzle, I contend, is definitional stasis. According to stasis theory, if we focus our efforts on *second-order* matters (i.e., pertaining to action, value, and jurisdiction) without settling *first-order* matters (i.e., pertaining to fact, definition, and cause), we’ll remain in stasis, unable to progress past any unresolved steps in the ordered sequence (Fahnestock and Secor). We’ve built some common ground in second-order matters of value and action (e.g., deeming *transfer* insufficient; considering replacement) and first-order matters of fact and cause (e.g., the working principles in the *Elon Statement on Writing Transfer*); however, our interventional progress towards second-order *action* has stalled in the first-order because of unresolved matters of definition.

So far, our replacement efforts have been preoccupied—productively so—with developing and advocating more generative and precise metaphors regarding how prior learning affects learning in other contexts; however, intervention efforts remain thwarted by unresolved differences in the definitional language used, spurred by concerns over each specimen’s conceptual affordances and limitations, metaphoric precision, and amount of baggage it carries. Regardless of individuals’ willingness to compromise, our collective action (or lack thereof) constitutes an appeal to perfection: a fallacious line of reasoning that any proposed solution is unacceptable unless it resolves every aspect of the problem at hand. Analogous to electoral politics, our candidates collectively represent a majority challenge to the status quo; however, splitting our support between them merely empowers an unpopular incumbent to remain in office. Thus, ending our definitional stasis—that is, getting unstuck in our efforts to replace *transfer*—requires a different approach than continuous fine-tuning of metaphors with optimization as our initial rather than terminal goal.

Interventional Strategy

I contend that our efforts to disrupt *transfer* must involve interventional strategy, by which I mean negotiating the logics and logistics of terminological circulation and compromising as needed to achieve incremental progress. Regardless of its imprecision, *transfer* condenses the core idea into a single word that is visually and aurally compact, grammatically flexible, and well-suited to academic publication infrastructures. Replacing *transfer*, then, requires strategic selection of a commonplace, sentence-level alternative with uptake potential both within and outside the discipline that at least matches, if not exceeds, that of the term we intend to replace.

My intention is not to devise a new metaphor since there is no shortage of proposed alternatives—scholars employ dozens of preferable sentence-level terms to denote the process(es) involved. However, initiating strategic selection of an alternative requires attending to both theoretical and practical considerations. To that end, I propose that such a term must sufficiently meet the following conditions: abstract processuality; hypernymy; availability; substitutability; conventionality; compatibility; and flexibility. As a tentative first step towards strategic selection, I propose that *transformation* meets all seven conditions, making it a promising contender for interventional strategy.

Abstract Processuality

Terms that denote abstract processes should better mitigate the implications of SMT than those that evoke concrete actions involving source domains such as transportation/spatial movement and concrete object manipulation. Conveyance metaphors like *mobilization* and *retrieval* risk susceptibility to notions of distance between contexts (see section 3.1), while metaphors of concrete action (*assembling*; *construction*; *modification*; *product[ion]*; *reconstruction*; *reshaping*) promote objectification of learning (Donahue, “Writing” 117; Jarratt et al. 54; Adler-Kassner et al., “Assembling” 17; Hager and Hodkinson 633; Reiff and Bawarshi 330; Beach, “Consequential Transitions: A Sociocultural” 130; Hatano and Greeno 645; Baird and Dilger 687). Additionally, this condition should extend to terms criticized in association with the application metaphor, regardless of abstraction (e.g., *application*; *mapping*) (Yancey et al., *Writing* 7–8; Anson 544). While terms meeting the condition of abstract processuality (such as *generalization* and *transformation*) may not be wholly immune to the implications mentioned above, as discussed in a prior section, this condition reduces susceptibility and therefore promotes more productive change (Beach, “Consequential Transitions: A Developmental” 40; Donahue, “Writing” 129).

Hypernymy

Since *transfer* is used as a hypernym to denote a range of subprocesses, a successful replacement should be similarly superordinate. Subordinate metaphors evoke actions specific to either source contexts (*acquisition*)

or target contexts (*assimilation; integration*) rather than denoting multi- or trans-contextual processes, thereby disadvantaging them as candidates to replace a whole-process term (Devitt 220; Chi et al. 34; Nowacek 8). By this token, paired terms such as *decontextualization* and *recontextualization* risk being subordinated under *transfer* rather than succeeding it (Donahue, “Writing” 111). Other terms, while often unpaired in the literature, imply an unspoken prior process regarding the source context, particularly terms with the prefix *-re* (e.g., *repurposing, reuse*) that emphasize target contexts (Reiff and Bawarshi 328).

One might argue that *remix* is an exception given its versatile coinage as an unpaired term in both popular and academic discourse (Robertson et al.; Yancey 5). Conversely, while *abstraction* has superordinate potential, it is frequently subsumed under other process terms or metaphors in the literature (Perkins and Salomon, “Transfer” 7). While not insurmountable, this concern poses potential disadvantages that are not shared by *generalization* and *transformation*.

Availability

Strategic intervention requires a term that is reasonably available for broad (re)branding efforts relevant to language research and education. This requirement eliminates contenders facing substantial barriers to uptake due to widespread usage (and usefulness) for other concepts. Of course, no proposed alternative boasts a clean slate across disciplines, so language scholars and educators will likely disagree about which terms are too strongly associated with a specific concept or topic to facilitate a large-scale (re)branding effort.

Nevertheless, for the sake of demonstration, a keyword search for each contender in an academic database—filtered for peer-reviewed journal articles, language- and education-related disciplines, and sorted according to relevance—can indicate potential barriers to (re)branding. In my own searches, the first fifty article titles retrieved for *generalization* spanned a handful of usages for multiple concepts regarding inferential reasoning in epistemology, formal logic, computer-human interaction, argumentation theory, research methodologies, and so on (Beach, “Consequential Transitions: A Developmental” 40). In contrast, save for three outliers denoting information access in computing, article titles retrieved for *access* exclusively used the term to denote equitability of (potential) participation (i.e., in geolocational, social, and technological spaces), indicating that it faces more significant barriers to (re)branding (Nowacek et al.). Moreover, given its central role in scholarship, pedagogy, and activism concerned with disability and social justice, promotion of *access* for a different purpose raises important ethical considerations regarding appropriation of the term from activists and scholars striving to address issues of access and accessibility.

Another term that strains availability is *translation*, which would be competing for third place in terms of signification, given that it primarily denotes translation between languages and secondarily denotes translation between linguistic, epistemic, and rhetorical contexts (e.g., technical translation; public communication of science; etc.). Anecdotally, this educator stopped using the term *translation* even for secondary purposes in student-facing texts after multilingual students expressed initial confusion and anxiety regarding the prompt for an ‘expert-to-popular adaptation’ assignment, which directed them to select a peer reviewed research report and ‘translate’ it for non-expert readers.

Substitutability

Despite our field’s critical attention to rhetorical strategies in domains like advertising and politics, questions of whether or not a given term is marketable for practical or aesthetic reasons (e.g., being unique, memorable, accessible, appealing, interesting, fitting the mood or register, easy to read and pronounce, etc.) barely registers as a concern in our efforts to replace *transfer*, excepting Donahue’s brief concession that *transformation* is “less handy in a sentence” (“Writing” 129). Being two syllables and a handful of letters longer is not entirely inconsequential; however, while ‘just accomplish it’ makes for an unwieldy athletic

apparel slogan, *transformation* proves quite manageable in language scholarship. Nevertheless, while scholars rightly prioritize higher-order concerns such as conceptual accuracy, affordance, and generativity in developing terminology, strategic intervention must also account for lower-order concerns of marketability. To that end, further interrogation of handiness sheds light on a lower-order condition: our selected term must be intuitively substitutable for *transfer* in terms of grammar, syntax, and other sentence-level mechanical concerns.

As Wiggins and Bowers explain, successful memes embed implicit instructions for future derivations (1897–1901). Consider, for example, image macros: an internet meme format that pairs an image from TV, film, or other media with overlaid text comprised of a phrasal template akin to linguistic snowclones: well-known phrase structures such as ‘to [x] or not to [x]’ or ‘[x] is the new [y]’ that retain recognizability across derivations. Even with limited knowledge of the source material (e.g., the line, “stop trying to make *fetch* happen” from *Mean Girls*), users can discern from a few derivations which components are stable (stills of the character), which are substitutable (the attempted catchword “fetch”), and what attitudes drive substitutional choices (mocking failed or transient trends) in conventional use.

As a simple exercise, imagine the following as a phrasal template with *transfer* as the variable, allowing for prepositional changes as well: ‘students transfer prior learning to/for/in the workplace.’ Revising to test our various options can reveal potential affordances and constraints related to substitutability. How much structural revision or planning is required? How much background knowledge of specific usage is required? Some terms present greater ambiguity regarding hypernymy (e.g., do students *access* prior learning *in* the workplace—while working—or *for* the workplace, potentially an anticipated future context?). Some revive concerns about handiness (e.g., the fragmentation into two steps in ‘students *decontextualize* prior learning and *recontextualize* it in the workplace’). Others may seem esoteric or virtually inscrutable without prior knowledge of specific scholarship, such as “holistic becoming” (e.g., students *become* in the workplace?) (Hager and Hodkinson 622–633).

Of course, the phrasal contexts for *transfer* aren’t as fixed as those constituting snowclones or conventional image macros; nevertheless, selecting for intuitive substitutability attends to rhetorical velocity—the diffuse, interactive logistics by which our terminology must be taken up and reused in ways that promote our rhetorical goals (Ridolfo and DeVoss). As an inventional heuristic, rhetorical velocity raises strategic questions: Who will take up our term and recompose it? How, why, and for how long? Which term best negotiates the concerns of the heterogeneous groups interested in *transfer*? How can we encourage positive appropriation that supports the goal of replacing *transfer*?

Conventionality

Further attending to marketing potential, strategic intervention should consider whether or not a term befits the linguistic conventions and cultural norms of target audiences. Specifically, the term must have uptake potential among scholars, educators, and administrators within and beyond the disciplinary level and, ideally, among external stakeholders engaged in conversations about education, such as students, school board members, industry recruiters, legislators, and so on. Additional strategic questions arise: what contradictions or other complications might substitution present in terms of affective or attitudinal associations? What other uses overlap, weaken the association, take precedence in common usage, or otherwise strain cultural and linguistic norms in higher education and research? What level of exposure does the term already exhibit in relevant contexts? Is the term a neologism too niche to disciplinary insiders? Or is the term commonplace to the point of risking overexposure?

Some terms, while reasonably available in immediate scholarship, may prove too closely associated with particular technical meanings in multidisciplinary contexts, such as the sociopolitical entailments of *integration* and *assimilation* (Nowacek 8; Robertson et al.; Yancey 5). Some may appear generic in writing-

related contexts due to common usage (e.g., *productive* writing processes; *transition* sentences). Some entail moods or attitudes that may spark negative associations (e.g., *assimilation* bears traces of conformity, imposed identity, etc.). Some may strain or violate group identification within academia; for example, given its strong associations with contemporary music and digital media, *remix* prods at the long-imagined separation between academic and popular cultures—a worthwhile project, perhaps, but nonetheless a potential barrier to uptake among academic institutions and disciplines that enculturate rhetorics of tradition, prestige, and decorum.

At this point, our stock of dozens could be narrowed by the aforementioned conditions of abstract processuality, hypernymy, availability, substitutability, and conventionality in the search for our least defeasible option: *access*, *acquisition*, *application*, *assembling*, *assimilation*, *becoming*, *construction*, *de/recontextualization*, *extraction*, *integration*, *mapping*, *modification*, *production*, *reconstruction*, *reshaping*, *repurposing*, *reuse*, and *translation*. Although not decisively ruled out by any one condition, some potential drawbacks for *abstraction* and *remix* arise in terms of hypernymy and marketability, respectively, so championing either term involves potential risks. With such considerations in mind, I've identified four contenders that I believe outperform others regarding the conditions above:

- *Adapt/Adaptation*. Potential entailments include derivation; media conversion ('film adaptation'); biology; product development and marketing; adaptable skills; adaptive business; malleable; pliant; yielding (Salomon and Perkins 113).
- *Generalize/Generalization*. Potential entailments include nonspecific ('generalized criticism of politicians'); in empirical research, inferencing features of population by extrapolating from sample data; error in inferential reasoning ('hasty generalization'); non-specialized/non-specialist (generalist); broad; shallow; superficial (Beach, "Consequential Transitions: A Developmental" 40).
- *Transform/Transformation*. Potential entailments include personally significant or meaningful (transformative experience); extensive or complete change; self-help and personal betterment ('transform your life'); religious practice or spiritual growth (spiritual transformation); sentimentality; transcendence (Donahue, "Writing" 129).
- *Transition*. Potential entailments include trapped; in limbo ('stuck in transition'); in-between; incomplete ('light sleep is a transition between wakefulness and REM sleep'); undefined; lacking clear identity; inferior stage ('for a transition album, the songs aren't unlistenable'); in writing, shift in subject or location (transition sentences) (Beach, "Consequential Transitions: A Sociocultural" 102).

The remaining conditions of compatibility and flexibility turn attention from constraints to affordances.

Compatibility

Our selected term must be conceptually compatible with current models of learning and with diverse perspectives of learning continuity and change. In the manner of boundary objects, a unifying keyword must inhabit multiple worlds at once, negotiating the concerns and bridging the different partial knowledges of heterogeneous groups involved in co-construction of theory (Star and Griesemer 393–412).

In a synthesis of US and European scholarship across multiple languages, disciplines, and research areas, Donahue makes a compelling case for *transformation* as capable of—and already employed for—unifying diverse groups and perspectives:

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 (“Writing” 129).

In bridging such diverse perspectives, *transformation* meets the condition of conceptual compatibility required for uptake of a unifying keyword. Similarly, Wardle promotes *generalization* for being compatible with cognitive transfer, situated, sociocultural, and activity-based conceptions and for attending to contexts and social processes (66–69).

Notably, while one could make similar claims about *transition*'s compatibility, prominent sociocultural models treat *transition* as a sub-process of sorts, a mediational state change by which *generalization* happens, which may pose compatibility issues when synthesizing models and uniting scholars within and outside sociocultural theories. *Adaptation* poses no obvious compatibility challenges; however, it has yet to receive the degree of visibility and support afforded to both *generalization* and *transformation* as potential unifiers of divergent theoretical threads. Thus, while all four contenders are metaphorically compatible with a range of contemporary models, *adaptation*'s relative lack of attention as a unifying term and *transition*'s variable superordinate/subordinate status across different theoretical areas—and strong association with one particular area—might pose uptake issues.

Flexibility

The various threads of research on *transfer* attend in different measures to three key variables: learners, knowledge, and contexts (*Elon Statement on Writing Transfer* 5; see also Wardle 66–68). Thus, to build common ground between these various conceptions, our selected term must be semantically flexible for describing processes and interactions within and between each permutation of these variables.

Signaling such flexibility, *transformation* describes a range of processes across the major theoretical areas addressed in this analysis. In threshold concepts, *transformation* describes “a significant shift in the perception of a subject,” thereby describing processes affecting learners and knowledge (Meyer and Land, “Threshold Concepts and Troublesome Knowledge: Linkages” 415). In boundary crossing, *transformation* denotes a five-stage learning mechanism leading to “profound changes in practices, potentially even the creation of a new, in-between practice,” describing processes affecting learners (especially learners’ actions) and contexts (Akkerman and Bakker 146–150). In consequential transitions, Beach defines *generalization* as “continuity and *transformation* of knowledge, skill, and identity across various forms of social organization,” describing processes affecting learners, knowledge, and contexts and arising from interactions between them (Beach, “Consequential Transitions: A Sociocultural” 112; emphasis added). (Notably, in this latter instance, *transformation* is introduced (alongside *continuity*) as a sub-process of *generalization*; however, its usage in this case still indicates superordinate potential insofar as it denotes what research on *transfer* purports to study: cross-contextual changes in learning.) Thus, *transformation*'s semantic flexibility affords denotation of a range of processes, thereby bridging theoretical threads that emphasize different permutations of key variables.

Transformational Compromise

Of the terms considered above, our two most promising contenders diverge from one another in terms of specificity: *generalization* evokes cognitive processes, thereby affording greater precision, whereas *transformation* broadly applies to processual changes in states or conditions, thereby affording greater flexibility. From a theoretical standpoint, I find *generalization* more compelling because it balances precision and flexibility; however, strategic intervention requires compromise. If *transformation* affords both unmatched unifying potential and circulatory momentum, as Donahue argues, then from a pragmatic standpoint it could be the key to ending our definitional stasis, or at least splitting the incumbent's

constituency, thereby destabilizing the status quo and paving the way for another candidate to prevail (129).

Transformation is far from perfect, given that it can still be used in ways that objectify learning. It may face barriers to uptake due to being perceived variously as too generic or too sentimental. Its similarity to transfer could facilitate substitutability, but could also limit uptake by appearing too incremental a change and therefore less enticing than dissimilar alternatives. Nevertheless, its abstract processuality mitigates—however incrementally—objectification of learning, the application metaphor, container metaphors, intuitive notions of distance, and implications of simple or rote transportation between static contexts. Thus, considering its potential mitigating effects for SMT in addition to its hypernymy, availability, substitutability, conventionality, compatibility, and flexibility, I contend that *transformation* is well-suited for the practical and logistical challenges of uptake and circulation, signaling it as a strategic candidate for intervening in the entrenched circulation of, and potentially replacing, *transfer*.

Step Two: Conventionalizing Mindfulness

Of course, as I've argued throughout this article, supplanting *transfer* with a better metaphor will not eradicate the system that underlies it, which is more diffuse and subtle than a single umbrella term. Thus, an additional step must be taken to further mitigate the influence of SMT. I propose conventionalizing habits of language and mind that make SMT and its tacit implications explicit. At first glance, it may seem a modest or familiar idea to raise awareness—to “mind our metaphors” as Rodgers suggests (575–576; see also Alexander et al. 107–108). What I'm proposing, however, is mindfulness exercised collectively rather than individually and achieved via the same processes of enculturation that shape our disciplinary culture.

Terminological Disclaimers

Scholars have already laid crucial groundwork for such mindfulness via participation in conventionalizing what I call the terminological disclaimer: brief or footnoted objections, qualifications, or subtler cues like scare quotes to disrupt assumptions of consensus implicated by widespread or unifying use of a terminology. Terminological disclaimers for *transfer* vary in length and content, but they conventionally appear within the first few paragraphs or footnotes and perform one or more of the following rhetorical moves in their disclaimer statements, arranged in descending order of conviction.

- *Explicitly criticizing transfer*. For example, Donahue uses the term in a chapter title, but cautions against transfer's “metaphoric limitations” early in the text (“Writing” 108).
- *Framing transfer as compulsory or used under protest*. For example, Anson begrudges the term's popularity and drawbacks: “because the term transfer is now so widespread, it will be used here *in spite* of its semantic limitations” (544; emphasis added).
- *Indicating transfer's controversial status in the field*. For example, despite the term's titular role in the *Elon Statement on Writing Transfer*, the authors spend the third and fourth sentences weighing the support for and opposition to *transfer* (1).
- *Acknowledging alternatives to transfer*. For example, Moore carefully qualifies use of the umbrella term: “although the title of this article suggests that the field has settled on ‘transfer’ ... [scholars continue to] use an array of terms, including transfer, transition, integration, and generalizations.”

While one could argue that this practice helps perpetuate the very term it cautions against, both by contributing to keyword metrics and by framing the contested term as too big to fail, our terminological disclaimer for *transfer* sustains a prominent awareness-raising campaign regarding its limitations and entailments (see additional examples in Beach, “Consequential Transitions: A Sociocultural”; Hager and

Expanding the Disclaimer

Through routine and widespread use, this terminological disclaimer has developed into a genre convention: a typified rhetorical action by writers participating in our disciplinary forms of communicating (Miller). Such conventions are not arbitrary; rather, they reinforce the underlying values, beliefs, and practices of a community—or, at the very least, prove compatible enough to survive (Linton et al.). The relative stability of the disclaimer affords kairotic potential for further development and conventionalization of other terminological issues. I propose expanding this terminological disclaimer to address the *system* of spatialized terms rather than, or in addition to, disclaiming individual manifestations, and conventionalizing this expansion in our individual, social, and institutional practices.

The *transfer* disclaimer demonstrates enculturation processes at work. Genre conventions play a key role in enculturating members into a community by signaling tacit agreement about what beliefs are widely shared or expected of initiated members. Genre conventions are reinforced via individual practices (e.g., asserting one's membership by mastering conventions), social practices (e.g., collective actions affecting the organic processes of uptake and circulation, such as citing or not citing a text), and institutional practices (e.g., publication requirements such as peer review). Myriad factors shape how deviation from convention will be received, such as whether a scholar's credibility is firmly established or whether the deviation is situationally appropriate; however, for emerging scholars, honoring convention asserts ethos as an initiated member of the discipline. In short, genre conventions arise from tacit agreement manifested as typified actions and, in turn, shape future actions. Through this enculturation process, the *transfer* disclaimer impresses upon members that mindfulness of the term's conceptual and metaphoric limitations is a shared value and expected practice.

The terminological disclaimer for *transfer* perfectly demonstrates the power of mindfulness by research communities whose changing knowledge and values have become discordant with their conceptual language. As Small observes, frequently cited works become less of a roadmap to specific sources and more of a “standard [concept] symbol:” as an idea circulates and changes, the symbol changes too (328–329). As a result of terminological disclaimers, our standard concept symbol *transfer* metonymically stands in for an entire cluster of ideas familiar to enculturated researchers, encoding shared conceptions and histories of the term, including criticisms. By expanding the disclaimer to target the *system* of spatialized terms, we can infuse our standard concept symbols with our criticisms of its scope, implications, and potential influence. Consequently, we can conventionalize *mindfulness of SMT* as part of the processes, methods, and habits of mind that together construct the “social reality” of our disciplinary culture (Rose 31).

Mindfulness in Practice

Conventionalizing mindfulness will not eradicate SMT but will encourage incremental changes towards mitigating some of its implications. Much like criticism of *transfer* has proven a generative starting point for the further development of theories such as consequential transitions and boundary crossing, enculturating mindfulness of SMT may prove a crucial starting point—however incremental—for picking at cracks in the metaphoric foundation, unearthing new conceptual spaces, and seeing where they lead.

What does such mindfulness look like in practice? Consider, for example, the experience of reading this article. Readers may have noticed the author's own use of spatial and transportation metaphors throughout this conclusion (e.g., *carrying baggage*; *getting unstuck*; *spatial metaphors aren't going anywhere*; etc.) and perceived discord in the simultaneous use and criticism of spatial metaphors. Such discord signals engagement with the processes of mindfulness described here, including subtle attuning to manifestations of spatial thinking, questioning the intent and effect of the author's use of these terms, and—at the fullest level

of engagement—wondering how this spatial language might be shaping or influencing the discussion at hand. By conventionalizing mindfulness about the metaphoric constraints of our language, we can reshape our ways of thinking and communicating about learning transformation to align more closely with what we think it involves.

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