TRANSLATION AND TRANSFER:
INTERDISCIPLINARY WRITING AND COMMUNICATION

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ABSTRACT

As institutions of higher learning make growing numbers of interdisciplinary faculty hires, establish ever more interdisciplinary units, develop interdisciplinary curricula, and pursue growth sectors such as global and online education, the ability to write effectively across disciplinary boundaries is becoming ever more vital, and ever more complex. The rapidly changing and expanding academic climate lends urgency for all students, faculty, staff, and administrators not only to learn *how* to communicate across disciplines, but also to reflect meaningfully on *why* they might want to do so. Drawing on David Russell's activity theory and other scholarship on writing transfer, this paper argues that scholars bear a responsibility to honor and propagate their own discipline's discourse conventions even as they also must develop strategies for effective interdisciplinary communication through writing.[1]

Keywords: Writing Transfer, Writing, Interdisciplinary Communication.

1. INTRODUCTION

"Most public intellectuals as well as experts in future studies would agree that the increasingly global society of the first half of the twenty-first century will be characterized by increasing connectivity, diversity, scale, and rapidity of change…. [S]mall events on one part of the planet and in one sphere of human existence can now end up having large and relatively rapid effects on other parts of the planet and in other spheres of human existence. … Coping with this complexity will require a new way of understanding—one that does not rely on having only a single viewpoint." [1]

One need not be involved in "future studies" or even "interdisciplinary studies" to find ways in which

interdisciplinary communication already impacts the work of the academy.

As postsecondary institutions make growing numbers of interdisciplinary faculty hires, establish more interdisciplinary units, develop interdisciplinary curricula, and pursue growth sectors such as global and online education, the ability to write effectively across disciplinary boundaries is becoming ever more vital, and ever more complex. The rapidly changing and expanding academic climate lends urgency for students, faculty, staff, and administrators not only to learn *how* to communicate across disciplines, but also to reflect meaningfully on *why* it can be so challenging and *what* they stand to gain from doing so.

Learning how to be effective at interdisciplinary communication is hard, in part because of the shifting conventions and expectations for writing across disciplines. Disciplinary context shapes and reflects the kinds of questions academic writers ask, the values they embrace, and the knowledge they create through writing. Students have an especially difficult time navigating interdisciplinary terrain. Faculty do too.

In this paper I will draw on David Russell's activity theory to discuss challenges of, strategies for, and benefits of interdisciplinary communication through writing. The kind of epistemological shift in thinking and writing demanded by the rapidly shifting and highly connected realities of twenty-first century literacy and discourse requires what is known in the field of writing studies as *writing transfer*.

Writing transfer, though, does not purport to elide disciplinary boundaries. On the contrary, being well versed at writing transfer asks that scholars recognize explicitly the disciplinary context within which they do produce knowledge as a way of then considering whether and how they may want to translate and apply those practices to other writing occasions, for other imagined and real audiences. My hope is that this paper will show how important it is to honor and maintain disciplinary modes of knowledge making, even as I also illustrate the dynamic and interconnected nature of academic writing and inspire faculty, staff, students, and others associated with academia to share knowledge, practices, approaches, and skills in interdisciplinary frames.

Again, adopting a habit of mind grounded on writing transfer and being willing to engage in interdisciplinary

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conversations does not demand that one relinquish disciplinary situatedness. This kind of approach, which values disciplinary *and* interdisciplinary communication has the potential to have a spread of effect that can make room for increasing collaboration and cross-fertilization of ideas, embodying to an even greater degree the capacity of academia to engage more broadly in transfer by applying heterogeneous concepts and practices to new and different problems and possibilities. By cultivating their awareness of disciplinary perspectives alongside the rewards of interdisciplinarity, scholars can more effectively learn to transfer their knowledge, practices, goals, identities, and ideas from one context to others. Engaging in interdisciplinary communication, however, also has somewhat unexpected potential to further strengthen disciplinary awareness and enable scholars to simultaneously hone their acumen at disciplinary communication.

2. THE PARADOX OF INTERDISCIPLINARITY

Interdisciplinarity seems, on the surface, easy to define. When I use the term, I refer quite literally to moments when someone is communicating ideas to people outside of his or her immediate discipline. What undergirds interdisciplinary communication most prominently is the ability to think across paradigms, to reframe perspective in a way that is both within and outside of one's inherited epistemology. Interdisciplinary communication involves, essentially, a new approach to thinking, grounded, paradoxically, on disciplinarity.

Interdisciplinary communication can occur horizontally, where a scholar draws from and writes or communicates to scholars in other disciplines (this branches into what is termed Writing across the Curriculum (WAC)), or it can occur vertically, where one writes to people at different levels of an institution. But academic writing for interdisciplinary communication occurs along other vectors as well, including national and international borders, and time. It also brushes up against other related nomenclatures, such as "public scholarship," whereby academics communicate with larger public audiences. Interdisciplinary communication can occur deliberately, or in unanticipated and unexpected ways. And all of these vectors are overlapping.

But: even as I begin to define interdisciplinarity, I find myself facing a paradox. For, one of the problems inherent in conversations about interdisciplinarity is that the term by its very nature essentializes disciplines, insisting that we must somehow first agree on what we understand to be psychology, or mechanical engineering, or history for the purpose of then deciding how they can intersect. The paradox extends even farther as interdisciplinarity then often moves ultimately to disrupt the very disciplinary boundaries it initially created until notions of disciplines again recede into nebulous fogginess.

Scholars in the late twentieth century must have felt anxiety over a burgeoning disciplinary amorphism because it was in this era that people brought renewed energy to attempts to classify disciplines, defining and molding them, trying to contain them at the very juncture when they seemed on the brink of becoming indistinct.

One of the most influential of these models for disciplinary classification is the Biglan model, introduced in 1973. Biglan relies on binaries: hard (engineering, chemistry) or soft (education, sociology); pure (mathematics, sociology) or applied (finance); life (biology) or nonlife (geology and computer science) [2] [3]. Other ways of arranging disciplines include codification, paradigm development, and consensus. [4]

Despite these real or imagined pressures to classify and differentiate disciplines, however, those who engage in knowledge production know on an instinctive level that disciplines are not discrete, singular entities, but that they intersect and overlap. Dawn Youngblood, for instance, invokes John Donne to represent this interconnectivity, "No discipline is an island." [5] In one of my own papers in progress I represent this interconnectivity by arguing that the concept of deep time, with cladograms and branching orders of cousinhood, is an apt metaphor for disciplines as it shows how they are interwoven and recursive. [6]

Even if disciplines could be codified, one must also note that they are created and sustained by human beings, and are thereby inherently dynamic and have elements that are, more or less, largely idiosyncratic. Humans create knowledge, rethink approaches, change, and move disciplines forward (or sometimes backward). Moreover, academic writing within disciplines is shaped by individual scholars' dispositions, experiences, and approaches to learning, thinking, and writing. For that reason, disciplinary writing, by its nature, grows and changes as well. It is dynamic rather than static.

Values, conventions, and expectations about writing shift not only between disciplines and people, but often within disciplines and across historical and cultural contexts as well. Janice Walker, a scholar of writing studies, uses citation to discuss just how variegated the landscape of citation in academic writing is:

> Strict attribution of sources has not always been necessary, and indeed in many cultures and contexts, it is still not (necessarily) required. Ancient texts often did not follow any formal rules of attribution, since it was assumed that the audience would already be familiar with the body of scholarly work. I[n some cultures today] the words of others are used without attribution as a way of honoring those whose words [are] considered so important that they needed no attribution. [7]

Walker, herself an expert in writing studies and a highly accomplished writer, ultimately exclaims: "I'm *so* confused!"

The term interdisciplinary, then, paradoxically has the impossible task of trying to create disciplinarity in order to dismantle it.

Career-related data about disciplines reflect the interplay and tension between disciplinary rigidity and porousness. In the 2012 *Report of the Job Information List* of the Modern Language Association, readers can find over 20 subspecialties within English: writing studies, composition, rhetoric, different historical periods of literature, different theoretical approaches. [8] English Studies branches into linguistics, communication, creative writing, literature, feminism, post-colonial studies, comparative studies, and American studies. Scholars in English write more for highly specialized audiences and more public audiences. Scholars in English study virtually every period where humans have existed, across the globe, from antiquity to contemporary blogs. English Ph.D.s look at prose, sound, poetry, cartoons, music, journalism, or visual texts.

Granted, English Studies is a discipline with comparatively less "consensus" than other disciplines. But even other disciplines with higher consensus have subspecialties that transverse disciplinary boundaries. The history of science, environmental science, the history of technology, neuropsychology …

In the same way as disciplines are, at heart, already interdisciplinary, so too is it fair to say that scholars already routinely communicate outside of the ivory tower. Every discipline has more public forms of scholarship, be they op eds, pamphlets, websites, or monographs that are lucky enough to make it to the shelves of the local bookstore. Search engines like Google Scholar and databases like JStor, movements like Massive Open Online Courses (MOOCs) make even the scholarship we might specifically create for other scholars be likely to be read by members of larger communities and publics. Within institutions, many of us are likely also already accustomed to writing for people outside of our fields or at different levels, be it for tenure and promotion review, annual reports, grant proposals, or letters of recommendation.

So all of this is to say that the good news is that, whether we know it or not, twenty-first century scholars are already accustomed to interdisciplinary communication.

And, yet, even as we might pat ourselves on our backs for our prowess and vast experience with interdisciplinary communication, we also all know that interdisciplinary communication has challenges, and that, 20 subspecialties or not, scholars in English tend to write and think differently than scholars in, for instance, Computer Science or Sociology. Moreover, this paper as it appears here, geared toward an interdisciplinary readership, sounds different than other versions of this paper I might produce for a textbook, or to a business, or to peer faculty at a campus in India or Brazil. The truth is, there *are* differences among and between disciplines, vertically, horizontally, and across international and linguistic borders. These differences in approach, epistemology, and value make interdisciplinary communication vital, even though difficult. The next section outlines more specifically the challenges involved in interdisciplinary communication.

3. MISFIRES, FAILURES, AND THE CHALLENGES OF INTERDISCIPLINARY COMMUNICATION

Although I presented towards the outset of this paper the notion that interdisciplinary communication offers an extra, supplemental opportunity for cultivating conversations across disciplines and frames, there are many times where interdisciplinary communication is laden with an urgency and mandate. The value of interdisciplinary communication, whether voluntary or required, cannot and should not be underestimated.

The following two anecdotes illustrate the importance of effective interdisciplinary communication and the potential consequences of failed attempts or misfires.

The first was told to me by my friend Edward M. White, a national expert on curricular assessment through writing. A few years ago,[2] Ed had been working as an assessment consultant for an institution and was leading a group of faculty who were rating student essays to determine learning gains. One of the essays was a history thesis about Richard II written by a senior; it contained beautifully written prose, provided a well-structured argument, explicated evidence from a strong range of scholarly sources, and made a compelling argument about Richard II. Ed, from English, rated it a 6, the highest possible rating.

Each essay was double blind scored, and the following day, when reviewing inter-rater scores, the team discovered that a professor of history had also rated that essay, yet he had rated it a 1, the least effective score on the rubric.

Ed was astonished; how could that essay have possibly been a 1? The historian was also astounded that it could be anything but a 1: apparently, the student's thesis was riddled with inaccuracies in evidence, most egregiously being that the student had identified Richard II as living in the 12th century instead of the 14th century.

Such an experience may seem to argue for the significance of disciplinary expertise, or it might seem to reflect merely an individual failure to either communicate across disciplines or to read across disciplines. However, what I

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[2] Specifics have been altered to protect the identity of the original participants.

would like to highlight about this anecdote is how deeply embedded disciplinary modes of reading and thinking are. Even with the presence of a highly specific rubric that both readers, the English professor and the History professor, were using, disciplinarity infused their approaches to the paper. Each faculty members' training created a predisposition for him to look for and prioritize *particular criteria* for judging the essay, while neglecting other criteria. The anecdote also emphasizes the increased responsibilities that attend interdisciplinary communication. Writers in interdisciplinary contexts need not only be wary of misrepresented facts or evidence, but should also keep in mind that readers may not be aware of certain facts or assumptions. Interdisciplinary communication demands making those assumptions explicit and visible.

The second anecdote also emphasizes the increased responsibilities undergirding interdisciplinary communication, as well as the immense consequences that can attend poorly designed interdisciplinary communication.

In 1979, Challenger engineers sent a memo to their managers regarding their uncertainty with the O-rings. While there were many causes of the Challenger explosion, a breakdown in communication due to interdisciplinary gaps is agreed by many to be among the most prominent causes. Engineers knew that the O-rings were not up to par for flight, and attempted to communicate this to management. However, based on shortcomings of interdisciplinary communication, management was unable to understand how vital O-rings were, and how risky the planned flight would be. The memo never got passed to upper-division management. Paul Dombrowski captures the failure of this interdisciplinary communication: "Before the launch, NASA officials construed information about O-ring charring in socially contingent ways … [and] differing methodological assumptions led them to different conclusions and recommendations." [9]

These anecdotes emphasize that disciplines enable certain forms of knowledge while actively disabling us from other forms. David Russell's activity theory, described in the following section, helps to further explain how and why disciplinary priorities, epistemology, and conventions are so rooted and engrained.

4. ACTIVITY THEORY AND INTERDISCIPLINARY COMMUNICATION

David Russell's influential work with activity theory offers a way of understanding from whence these interdisciplinary misfires emerge. Russell emphasizes that writing (along with other modes of communication) emerges from established and individualized networks of human interactions:

Activity theory develops the metaphor of interlocking, dynamic systems or networks. An activity system is any ongoing, object-directed, historically-conditioned, dialectically-structured, tool-mediated human interaction: a family, a religious organization, an advocacy group, a political movement, a course of study, a school, a discipline, a research laboratory, a profession, and so on. These activity systems are mutually (re)constructed by participants using certain tools and not others (including discursive tools such as speech sounds and inscriptions). [10]

Activity theory, then, suggests that each discipline—and each discipline's approach to writing—has a highly contextualized and historically grounded set of practices, motives, and approaches. As you can see from the image, writing thus reflects, shapes, and is shaped by the particular network from which it emerges:

Figure 1: An Activity System (Fundamental Unit of Analysis of Social Practices)
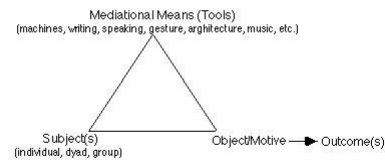

Figure 1: From Russell, "Rethinking"

Scholars can advance knowledge within their disciplines in part because, as activity theory demonstrates, they can build on the work of others and carry forward long-term conversations premised on shared knowledge and outcomes.

Those interested in activity theory and writing transfer, such as Charles Bazerman, identify patterns across texts in order to define these activity systems within disciplines. [11] In so doing, we come to understand disciplines as what Michael Carter terms, "ways of knowing." [12] James Porter defines these activity systems as discourse communities: "a local and temporary constraining system, defined by a body of texts (or more generally, practices) that are unified by a common focus. A discourse community is a textual system with stated and unstated conventions, a vital history, mechanisms for wielding power, institutional hierarchies, vested interests, and so on." [13] Significantly, however, these discourse communities not only enable these features and attributes, but also disable and stultify others, rendering the impact of activity theory a domain of both postive and negative polarity.

The enablement and inhibition underscoring activity theory and discourse communities not only helps us understand how knowledge is advanced and why interdisciplinary communication can be challenging, but also why writing, and more broadly academic inquiry, can be so challenging for undergraduates as they move between these activity systems without the meta-awareness to recognize and participate in them. Louis Menand identifies the problem as

an overall silo-ing in the academy, paradoxically during a time of increasing efforts toward interdisciplinarity across many institutions. [14] Gerald Graff, similarly, decries what he terms "a disconnected series of courses" that students take during college. [15] Perhaps as with the mid-twentieth century efforts to reinstantiate disciplinary boundaries, some domains of the academy respond to increasing interdisciplinarity by increasing efforts at disciplinary division and retrenchment. Such a response is understandable, but presumes that interdisciplinarity, unchecked, will inevitably elide disciplinarity.

Writing-studies scholars such as Carter suggest that faculty can be so immersed, perhaps willfully, in their particular discipline's activity systems that they are incapable of noticing the situatedness of writing in their field, let alone helping students understand these contexts. Carter writes, '[B]ecause professors typically learn to write in their disciplines not by any direct instruction but by a process of slow acculturation through various apprenticeship discourses, they are unable to see that writing itself is specific to the discipline." [16]

Perhaps because of an unwitting or overt resistance to interdisciplinarity—emerging from assumptions that interdisciplinarity and disciplinarity cannot coexist—moments of meta-awareness are often attended by complex, sometimes negative emotions. Rebecca Nowacek terms this "double binds": "[T]hose uncomfortable and perhaps inevitable situations in which individuals experience contradictions within or between activity systems (e.g., between the motives and tools within a single activity system or between the motives of two different activity systems) but cannot articulate any meta-awareness of those contradictions." [17]

5. WRITING TRANSFER AS A STRATEGY FOR IMPROVING INTERDISCIPLINARY COMMUNICATION

Scholars in writing studies who are interested in moving toward interdisciplinary communication seek to work against these kinds of challenges by cultivating deeper understandings about how teachers, students, writers of all kinds, can become better at writing transfer. Research into transfer has a long history, reaching back at least as far as Aristotle's *Rhetoric* in the fourth century BCE [18]. Contemporary research about transfer often builds on and invokes Russell's discussions of activity theory. Much of it focuses on how faculty can help students learn to be better at transfer. From Anne Beaufort, for instance, we learn that competing values in discourse communities can stymie students' abilities to effectively enact writing transfer. [19] Elizabeth Wardle emphasizes the importance of reflection and meta-awareness for writing transfer. [20] Even more recent work by Dana Lynn Driscoll and Jennifer Wells draws on psychology to examine "the role of learners' dispositions" in transfer. [21]

One of the most groundbreaking approaches to transfer of late is by Rebecca Nowacek. She has resituated binary conceptions of transfer (such as low-road (unconscious) or high-road (deliberate); positive or negative) to unpack a more matrixed approach: "four avenues of connection, four resources that individuals employ as they draw connections among various contexts: knowledge, ways of knowing, identity, and goals" [22] Nowacek foregrounds the agency involved with transfer among these four domains to emphasize that students are not merely conduits moving from context to context, but are instead "agents of integration" who actively reconstruct knowledge and practices as they enact transfer.

If undergraduates can be agents of transfer, so too can faculty. Nor does this need to happen only in explicitly interdisciplinary contexts. Fostering a culture that embraces interdisciplinarity does not by necessity render disciplinarity oblique. For twelve years now, I have been part of a multidisciplinary faculty in Duke University's Thompson Writing Program (the TWP). In the TWP, we hire faculty with doctorates across the sciences, social sciences, and humanities to teach writing. The faculty in the TWP design theme-based writing courses based on their disciplinary expertise. We term our program "multidisciplinary," rather than interdisciplinary, as a way of honoring the disciplinary perspectives each faculty member carries. Still, we also foster interdisciplinary conversations within and between these disciplinary frames.

The program is founded on the premise that cross-disciplinary conversations about first-year writing improve the teaching of writing and help first-year students learn how to more effectively navigate the wide and varying landscape of academic writing. But we also have a stake in fostering these interdisciplinary exchanges among our faculty, believing that writing transfer can enable scholars to more effectively transfer knowledge, ideas, and practices to other contexts, thereby increasing their growth as writers, thinkers, and global citizens.

This process of foregrounding interdisciplinary communication through writing begins in our Postdoctoral Summer Seminar in the Teaching of Writing where we spend three intensive weeks fostering interdisciplinary communication among our faculty. As a way of encouraging such insights, our teaching seminar for new first-year writing faculty, which I co-teach with my colleague Marcia Rego, mirrors a writing class as it offers one of the most foundational moments for establishing collaboration and relationships. Two activities in particular have been especially valuable for encouraging interdisciplinary communication and writing transfer: "Translating Scholarship" and "Disciplining Writing."[3]

"Disciplining Writing" asks participants to locate and share

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[3] I discuss these two activities in another paper-in-progress of mine as well. [23]

writing from their disciplines. The text is not designed to "represent" a discipline, but to raise questions or illustrate moves of argument and writing that can introduce others to that discipline. Based on these texts, we have conversations about intersections and departures of writing, thinking, and knowing across disciplines. "Translating scholarship" asks participants to introduce colleagues to their scholarship, much like what a job candidate might do when speaking with administrators at a prospective campus.

Activities such as these highlight the ways in which interdisciplinary communication is possible even as disciplinary perspectives retain some measure of individuation. As disciplinary experts, our disciplinary norms are often not visible to us. They become visible, though, through interdisciplinary conversations such as these.

6. CONCLUSIONS

Becoming better at interdisciplinary communication through writing, becoming better at writing transfer, requires nuanced thinking: Identifying patterns about writing that span disciplines and time and boundaries, as well as unique features of writing within each context. It also requires reflecting on your own approaches and values to writing.

Academic writing is hard, even for those of us who are purportedly experts at it. Our students deserve the chance to actively interrogate the ways in which academic inquiry, writing values, expectations, and conventions are shaped by and reflected in the writing that exists within disciplines. Faculty will no doubt learn from these exchanges as well.

In my own experience, reading and discussing scholarship from such disciplines as history, psychology, anthropology, and biology has immeasurably enhanced the ways in which I speak about academic writing with students and faculty, and the ways in which I write. Having this wider perspective enables scholars to more effectively be "ambassadors" for their disciplines [24].

The evidence of these potential gains in thinking becomes clear through such organizations as "Edge," which poses an annual question to scholars in numerous disciplines. [25] The idea is that we can learn more by considering a question from varying disciplinary perspectives.

But even if particular scholars are uninterested in translating their ideas to interdisciplinary settings, it is worth considering that interdisciplinarity can not only coexist with disciplinarity, but actually strengthen and embolden it. Interdisciplinarity helps us understand our own disciplines, and helps us understand ourselves as

discipline-d. The act of considering interdisciplinarity makes ones own discipline more transparent.

My goal for this paper is to make visible not only what writing skills or practices can be transferred across disciplinary boundaries, but how writers can more effectively learn to transfer their knowledge, practices, goals, identities, and ideas from one context to others. Interdisciplinary communication involves, essentially, a new approach to thinking. Gaining acumen in transfer—an essential and complex habit of mind—will enable you to strengthen your abilities in all sorts of domains (not only writing), so you can transfer knowledge and learning more generally and prepare yourself for the demands and opportunities of the twenty-first century world to which Newell refers.

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