

THE MALLEABILITY OF DISCIPLINARY IDENTITY

By Megan E. Mericle, B.A.

A Project Paper Submitted in Partial Fulfillment of the Requirements

for the Degree of

Master of Arts

in

English

University of Alaska Fairbanks

May 2017

APPROVED:

Sarah Stanley, Committee Chair
Daryl Farmer, Committee Co-Chair
Gerri Brightwell, Committee Member
Eileen Harney, Committee Member
Richard Carr, Chair

Department of English

Todd Sherman, Dean

College of Liberal Arts

Michael Castellini, *Dean of the Graduate School*

Abstract

This paper tracks the progress of a beginning undergraduate writer's disciplinary becoming. Much research in disciplinary identity focuses on graduate students and advanced undergraduate writers; however, sites of disciplinary identity formation also occur early on during the required first-year writing course. These sites are crucial because they inform the student writer's entrance into the academic conversation, and reveal the extent to which early assumptions about disciplinary roles affects further disciplinary identity formation. Drawing from Ivanič's framework of writer identity, this case study reveals the ever-shifting tensions of "disciplinary becoming." The analysis captures how a writer's discursive self shifts from a static disciplinary identity to a more malleable disciplinary identity through a cross-analysis of two separate writing assignments in order to learn how the student's petroleum engineer identity is performed, contradicted and re-negotiated. I argue that this shift will enable writing knowledge transfer and overall identity formation.

The Malleability of Disciplinary Identity

Students are encouraged earlier and earlier in their educational careers to specialize by choosing a major that is intended to later inform their career trajectory. The metaphor of the “path” is often cited, and students are often pushed to choose a direction that is supposed to determine the scope of the destination. Yet the path allows little room for movement, and isolates the student’s disciplinary choice. As students deal with setbacks, shifts, integration of new material and active change, it is important, early on, to introduce the idea that students can shape their disciplinary trajectory just as much as it may shape them, and that the shifting possibilities of career and future life choices may require adaptability as much as direction.

Since students are told to “choose” a major, not “construct” an identity associated with that major, they may spend the first two years of their undergraduate career seeing that major as an unshifting box that they must fill. However, students do not just journey along the path of learning, then eventually reach the house of their discipline, and knock to get in. Through their participation, they actively restructure and redecorate their disciplinary home. In other words, student values do not have to be erased in a sea of knowledge and expectation, but can be integrated in a process of becoming that will continue on throughout their careers.

Baccalaureate students often enter the university with expectations about how their disciplinary choice will affect them as individuals and lead to a future in employment beyond the university, and their experience is often focused on that chosen future, as well as the careers and income associated with it. Some choose their university because of the strength of a particular program. Others haven’t yet chosen a major, but find that the college environment pressures and encourages them to choose in order to progress and find an adviser, a course schedule to follow and often, a social group. College icebreakers stress “disciplinary identity,” and as students

introduce themselves using their name and major, this common practice signals that in their new environment, their major is *part of who they are*.

In this paper, I introduce Cody Keith, who I taught in a required writing course aimed at students in the sciences. Cody was a petroleum engineer from Alaska, and he was already cultivating a professional identity when he entered the classroom, insisting on ending each of our conferences with a handshake. He demonstrated a sense of disciplinary authority in the classroom, and would often discuss petroleum technology with the other engineers in the class, bringing up intersections between the course and his own field. Cody also engaged with a writing identity, particularly when we discussed genres of writing that intersected with genres used in the petroleum field, but he was the most engaged in the course during whole-class writing workshops, and he grew excited as he saw and shared possible choices for structure and punctuation in other students' work, focusing in particular on how those details would change how the writing was perceived.

Early on, Cody had concerns about the "formality" of his writing, indicating that he did not want to come off as "stuffy," and we discussed how changes in contexts and framing could give him a greater variety of writing styles, so that he felt he could draw on more resources as a writer, while also highlighting the benefits of his current writing style. As a petroleum engineering major, Cody entered an ongoing conversation particularly prevalent among Alaskan scientists. Since Alaska provides a unique context for environmental study due to the variety of ecosystems and intact geological formations, scientists with environmentalist identities are often drawn to the state, and the environment similarly inspires residents to study fields in the area of environmental science. In addition, the active presence of the petroleum industry leads some

scientists to pursue petroleum-related degrees. Though the stances of individual scientists vary widely, the two perceived identities create an immediate tension.

Over the course of the class, Cody demonstrated his own negotiation of the discursive space between environmentalism and affiliation with the petroleum industry. This paper explores the formation of an identity in relation to an academic discipline, and shows, by analyzing Cody's writing over the course of the semester, how formation of writing identity in the first-year writing classroom draws on and affects the formation of a specific disciplinary identity. My purpose is to demonstrate that disciplinary identity formation begins early on in the student's undergraduate career, and to outline possible consequences of both static and malleable disciplinary identities. I will begin by connecting the concept of disciplinary becoming (Dressen-Hammouda, 2008) to possibilities for self-hood (Ivanič, 1998), and then show the opportunities and difficulties they posed for Cody across the required writing curriculum.

Possibilities for Disciplinary Identity

Disciplinary identity is defined as the set of associations that immerse the individual in their chosen field of study. According to Dressen-Hammouda (2008), students establish disciplinary identity by learning shared norms of the discipline, mastering the fundamental genres of the discipline, and adopting the cognitive frames used by the discipline for examining and drawing conclusions about the world. Engrained in disciplinary identity is a perceived need for membership: Students are indirectly told that they must meet certain criteria before they can become recognized members of their discipline and can assume their disciplinary identity. Publications and citations, a full understanding of discipline fundamentals and methodologies, acceptance by authority figures in the discipline, diplomas and certificates are all seen as keys to membership, and the student may withhold membership until reaching one of those milestones,

saying “once I’m published, then I’ll be a *biologist*” or “once I graduate, then I’ll be an *engineer*.”

However, Dressen-Hammouda counteracts this assumption by introducing the concept of “disciplinary becoming,” an ongoing process in which students and scholars seek to find their own “disciplinary voice” within the constraints of their discipline (p. 234). Disciplinary becoming resists the membership model by focusing on the ongoing learning of discipline practices, and the burgeoning authority that emerges through student writing both in and about their chosen discipline. In the disciplinary becoming model, coursework and research are not barriers to be tackled before disciplinary identity can be realized, but checkpoints for progress along the path of evolving disciplinary identity.

Scholarship on disciplinary identity has primarily focused on advanced and graduate level development in order to determine how academics learn to position themselves in their field through their writing. The argument for this focus is that students are not truly immersed in the practices, genres and conversations of their discipline until the latter two years of four-year undergraduate programs, when their course loads are composed primarily of courses in their disciplines. Hyland (2002) states that “undergraduates are not expected to enter a disciplinary community,” defining the disciplinary community as a space where experts interact with one another and restricting his discussion primarily to advanced undergraduate students and graduate students, as these groups are in the process of establishing their disciplinary authority through authorship of theses and journal articles (p. 1094). “Threshold concepts,” or the basic concepts of particular disciplines, are seen as a needed precursor to disciplinary identity, as students without this basic knowledge supposedly do not have a conceptual grasp of their discipline, and therefore cannot incorporate it into their identity (Stokes, King & Libarkin, 2007).

McCune and Hounsell (2005) add that knowledge of the Ways of Thinking and Practicing (WTP) that are conventional for the discipline are essential to disciplinary identity, as that identity is formed in part by enacting the discipline through action and practice. However, when students cite the “student” identity in order to delay the discipline-specific identity, they miss out on the early stages of disciplinary becoming. When instructors and authority figures prevent students from fully delving into their disciplinary identities until they’ve reached a certain level, they allow misleading assumptions about disciplinary identities to remain unchecked. Instruction works by building on current knowledge; consequently, experts should acknowledge the existing disciplinary identity and understanding of students who enter their discipline, while also remaining open to the change that could result from the influence of new members who propose new WTPs.

In studying the characteristics of the disciplinary voice, Hyland (2002) draws on Roz Ivanič’s (1998) aspects of the writer’s identity, primarily focusing on the “discoursal self,” or the personal “voice” that the author communicates to the audience in a particular piece of writing. Through an examination of self-mention in research articles, Hyland (2001) determined that disciplinary identity is formed not only through accumulation of knowledge and acquisition of practice, but through the negotiation between self-positioning in the field and external shaping of the author’s identity. According to Hyland, writers must participate in a community of disciplinary discourse and compose new arguments that change the discipline through negotiation of rhetorical conventions. Although Hyland’s investigation is centered on the discoursal self of discipline-specific texts, disciplinary identity can also be enacted in non-discipline specific texts. In addition, by incorporating two additional aspects of Ivanič’s theory of writing identity, a complete picture of the early stages of disciplinary becoming begins to form.

Ivanič (1998) explains that there is often tension between how writers perceive themselves, how they are perceived and how they wish to be perceived in their discourse communities. In addition to the discursal self, she defines three elements that make up the “identity of a person in the act of writing”: the “autobiographical self,” the “self as author” and the “possibilities for selfhood” (p. 23-24). According to Ivanič, the autobiographical self is the identity shaped by events in the writer’s past, as well as the writer’s own self-understanding. The writer chooses how to represent this identity, drawing a “self-portrait,” as Ivanič describes it. By contrast, the possibilities for self-hood are the social contexts and institutions that the writer chooses to participate in, which shape the discursal and autobiographical selves externally.

Applied to disciplinary identity, the autobiographical self is the writer’s own understanding of their story in the discipline. For the biologist this may begin with childhood memories catching bugs in a backyard stream, and include recent field experience. The discursal self would then encompass the writer’s disciplinary voice in relation to their field, which would reach beyond peer-reviewed articles to include blog posts that pull from their expertise, and could be just as apparent in personal narratives that relate memories of the autobiographical self. Finally, the possibilities for self-hood are the most relevant for this study, as the writer’s discipline itself acts as a possibility for self-hood: Each discipline has its own accepted writing conventions, its own set of shared qualities and its own practices. The discipline shapes the writer by articulating boundaries; therefore, integration in a discipline is a social construction as much as it is a cognitive development, because the writer must learn to communicate effectively and understandably with other disciplinary members, remaining within the established confines of the discipline, while also possibly challenging it.

Ivanič also states that the relationship between the writer and the possibilities for self-hood is “two-way” (p. 28). The writer shapes the discipline when they react to conflicts between the autobiographical self and the discipline’s established practices, rather than subsuming their autobiographical self in the discipline. For example, within the literary community, this occurred as women and people of color entered the discipline and pushed back against the exclusivity of the white male canon, opening up the field to a more diverse array of texts, including the literature that had shaped their autobiographical selves.

First- and second-year students are placed in a unique position in the process of disciplinary becoming, since their disciplinary identities draw primarily on the autobiographical self, and they are not yet fully familiar with the WTPs of their discipline. In most universities, core curricula and liberal arts requirements place students in an interdisciplinary position, providing an early opportunity to connect future disciplinary interests to current interdisciplinary content. Possibilities for self-hood are still shifting, and students may hold certain assumptions about their chosen discipline that will later be challenged. At this point, students have the potential to shape their discipline by challenging its conventions. Ivanič points out that they can gain more status by choosing more “privileged” possibilities for self-hood, or the more accepted, established practices of the discipline; however, “every time a writer constructs a discursial self which draws on less privileged possibilities for self-hood they are, like a drop in the ocean, infinitesimally redefining the possibilities for self-hood which will, in turn, be available to future writers” (p. 28).

Therefore, it is important for students in these early stages of disciplinary becoming to not see their chosen, and considered, disciplines as boxes they must fill, but as changing forces which will shape their identities, and which, in turn, they will be able to shape through their

writing. One of the spaces in which students enact disciplinary identity and “try on” different possibilities for self-hood is the act of writing itself, particularly in the required writing curriculum.

Disciplinary Becoming in the Interdisciplinary Writing Classroom

First-year writing students perform disciplinary identity in multiple ways: by drawing on knowledge and practices in their writing, by resisting required content because they see it as residing outside their chosen discipline, and by perceiving similarities and differences between their discipline and that of their classmates and instructors. Researchers have pointed out that interaction both within and between disciplines can be seen in different ways, and these perceptions affect how the student interacts with others in the social context of the first-year writing course.

Hyland (2004) notes that disciplines have been referred to as “cultures,” “tribes,” “discourse communities” and “communities of practice,” all in the effort to understand how communication works both in and between disciplines (p. 10). Two of the terms, “discourse communities” and “communities of practice,” suggest that disciplines are either mainly concerned with communicating within the field in open “discourse,” or with sharing a set of agreed-upon ways of collecting information, respectively. Strenski (1989) adds two more ways of conceptualizing disciplinary relationships: In the army model, disciplines compete over scant knowledge “resources.” In the monastic model, disciplines are isolated places of quiet study that conform to past practices, and there is little to no communication between disciplines.

For that reason, writing students could see their fields as at odds or as completely separate from that of their classmates and instructor. Neither the army nor the monastic model encourages communication between disciplines. This reduces transfer, which is defined by

Yancey, Robertson, and Taczak (2014) as the student's ability to "draw upon, use, and repurpose" knowledge and practice in "new writing tasks in new settings" (p. 2). Since establishing a discipline-specific discursive self draws upon skills gained in other courses, early interaction with disciplinary becoming through writing in the first-year required writing course can act as a stepping stone toward later disciplinary becoming within the student's chosen discipline.

The challenge is often getting students to see work in another discipline as connected to their own disciplinary becoming. According to Li (2009), one practice that is part of disciplinary becoming is "boundary work," or work that establishes where the methods and practices of one discipline end and that of another discipline begin in order to separate "the way we do it" from the way students in other disciplines conduct their work. Read (2011) found that this self-definition can produce problems, as her experience as a writing consultant in an engineering program illustrates. She discovered that the faculty she consulted with did not integrate their identities as writers into their disciplinary identities as engineers, especially when in conversation with a "writer" (Read herself), an identity they articulated as "other."

I have seen a similar conflict in my work with student writers, where students often state that they are aware they need writing skills in order to fulfill the expectations of their discipline, but that they don't consider themselves "writers," or they use the writer identity to convey a negative ability by saying that they are "bad writers." Students recognize that different disciplines have different genre expectations, and they also construct expectations about writing in an English class (as first-year writing courses are often perceived) as separate and distinct from other disciplinary writing. As an engineering student said to me recently, "I'm an engineer, I'm used to getting straight to the point, not stretching it out like you do in English." The "I" and

“you” in this sentence operated to separate my identity as a writing instructor from his identity as an engineer, creating a gap between practices of the first-year writing classroom and the practices of engineering, and discouraging transfer as defined by Yancey, Robertson, and Taczak (2014). Students seek a way to do boundary work for their discipline, and in the practice-oriented writing classroom, this often manifests as resistance against the subject, the class requirements, or even the instructor.

Though potential disciplinary conflict and isolation may produce problems, the first-year writing classroom also acts as an open space in which students can be encouraged to explore rather than simply define their disciplinary identity. By interacting with students in other disciplines, practicing a variety of genres, learning how to transform writing for different audiences and engaging in writing projects that encourage self-exploration, students gain a greater understanding of their autobiographical selves before fully entering a disciplinary possibility of self-hood. The focus on writing as a practice that can unite all disciplines helps the first-year writing student find a balance between fulfilling disciplinary interests and remaining open to identity change beyond disciplinary identity. A holistic identity formation, in which the writer incorporates disciplinary identity into their overall identity rather than surrendering their identity to their discipline, means cultivating a malleable disciplinary identity that is open to both internal and external change.

Utilizing Narrative to Engage Disciplinary Identity

A productive tool for encouraging an exploration of disciplinary identity is narrative. Narrative has been declared as not only a reflection of identity, but as a key tool in forming and shaping identity. Social narratives shape the autobiographical self, and narratives that give information about disciplinary identity have been shown to affect disciplinary identity becoming,

though in some cases the pervasive myths about certain disciplines and careers may shape the autobiographical self negatively, causing the student writer to resist the possibility of self created by that myth. For example, later on Cody will engage in this negative shaping as he perceives a common narrative that depicts those in the petroleum engineering field as enemies of the environment.

Somers (1994) explains that narrative allows the writer to resist “essentialist” categories of identity, and gives the writer an opportunity to instead present a unique identity to the reader. Though she argues for the use of narrative in social science research, her rationale extends to the incorporation of narrative as a tool in disciplinary becoming. Somers intersects with Ivanič’s possibilities of selfhood by mentioning the way in which identity is shaped by external, and in this case narratological, social forces, stating, “social life is itself storied and... narrative is an ontological condition of social life.” She goes on to elaborate on the symbiotic relationship between narrative, or storytelling, and identity:

...stories guide action...people construct identities (however multiple and changing) by locating themselves or being located within a repertoire of emplotted stories... "experience" is constituted through narratives...people make sense of what has happened and is happening to them by attempting to assemble or in some way to integrate these happenings within one or more narratives...people are guided to act in certain ways, and not others, on the basis of the projections, expectations, and memories derived from a multiplicity but ultimately limited repertoire of available social, public, and cultural narratives. (p. 614)

The genre of the “literacy narrative” is built on the link between narrative and identity, based on the argument that an understanding of one’s own identity as a writer is an essential precursor to

development of writing practice. Narrative, by focusing on memory and sequence rather than topic, helps students envision their identity as continually changing and ongoing, just as their lives change and stretch onward. Furthermore, though narrative has been associated with the humanities, its position as a universal tool of social life makes it a non-discipline specific text, allowing the writer to engage with skills of transfer by re-framing content learned in their discipline in a genre that is not part of their discipline's practice.

Alexander (2015) notes how the literacy narrative in particular promotes reflection on identity formation, and she cites a number of researchers who prioritize reflection as one of the key goals of the assignment. However, she also questions "how teachers can assess reflective content in student products" (p. 45). In examining student work that looks in particular at identities of discipline rather than identities of literacy, I also ask how we can separate reflection from other forms of writing, and why reflection is essential to the goals of the types of writing I assign. In order to answer this, I should first explore my own disciplinary identity, and the origin of the value of reflection in my own development as a creative nonfiction writer.

My own disciplinary identity draws on both narrative in the pedagogical sense and in the literary sense. When I refer to narrative, I think of the definition offered by narratologists, which focuses on how narrative is used to apply language to past memories. Bochner (2007) states that narrative involves "making stories from one's lived history...a process by which ordinarily we revise the past retroactively, and when we do we are engaged in processes of languaging and describing that modify the past." For narratologists, narrative is an active connection between past and present that simultaneously changes the relationship between the two as the story is told. As an MFA student, I am also engaged with the creative writing definitions of narrative, particularly creative nonfiction, which I draw on in my course design. Creative nonfiction

stresses “making stories” in a way that is meaningful for the audience, utilizes selection of detail to create tension and interest, and stretches the boundaries of craft through experimentation in form and subject matter. Finally, I approach narrative as an instructor familiar with assignments that stress self-exploration, such as the literacy narrative, which, as Scott (1997) writes, allows students to both think of their literary development as valid and to recognize how their literacy identity is socially constructed by sponsors and peers. Narrative allows first-year writing students to engage with their autobiographical selves by drawing on their personal histories, their discursive selves by focusing on ways to make that history entertaining, and their possibilities for self-hood by encouraging them to interrogate and reflect on their ideologies.

Seeing my own disciplinary identity as sourced from multiple disciplines, I hope also to allow students to see narrative as working in some way in all of their courses, drawing together their autobiographical selves with their disciplinary possibilities for self-hood. I designed and sequenced my writing curriculum so narrative became the binding agent.

The Approach

How, knowing the possibility for tension between disciplinary conventions and the content of the required writing classroom, do we prepare students to embark on this negotiation between academic genre conventions and the disciplinary conventions that are a part of their educational careers? I examine a student whom I taught in the Fall semester of 2016, Cody Keith. His negotiation of this space engages in particular with Roz Ivanič’s discursive self, autobiographical self and possibilities for self-hood. I build on a question that Ivanič asks, “What possibilities for self-hood, in terms of relations of power, interests, values and beliefs are inscribed in the practices, genres and discourses which are supported by particular socio-cultural and institutional contexts?” (p. 29). In this case I ask, “What *disciplinary* possibilities for self-

hood, are explored, negotiated and re-framed as a result of the practices of the required writing classroom?” In other words, how do the students in required writing classrooms engage in disciplinary becoming within the texts they produce?

In her own case study, Ivanič issues the reminder that writing can be “double-voiced” by being “saturated in currently available discourses,” meaning that writing can operate in several discursal spaces at a time. In terms of my project, this reveals that even relation of Cody’s memories can be saturated in the disciplinary possibilities for self-hood that he anticipates. I explore whether Cody’s socially shaped possibilities for self-hood come into conflict with his internal reflection on the autobiographical self. In other words, is Cody integrating himself into “ready-made” disciplinary identities, or is he pushing back against some of the social expectations of his discipline? The answer to these questions, as applied to this specific case study, will allow me to consider how identity is transferred from the first-year writing classroom to the student’s chosen discipline, and determine the opportunities for growth in disciplinary identity. It is my hope that the practices of my writing classroom acquaint students with change, increase their comfort with uncertainty and allow them to perceive themselves in more holistic states of becoming.

In particular, I selected Cody because he makes a clear reference to constancy of identity in an early writing assignment, and because his final project for the course depicts a progression of choices that destabilize the constancy of the discursal self. In addition, Cody enters an ongoing conversation in petroleum engineering, and he also chooses to engage in conversations from other disciplines, which are informed by political stances different from his own. By using non-discipline specific texts to reach out of his own discipline and perform other identities, Cody’s writing shows a progression toward a more malleable sense of disciplinary identity, and

ultimately constructs a discorsal self that is at times discipline-specific, and at other points, interdisciplinary.

“I Don’t Want to Be a Villain in the World”: Resisting Disciplinary Possibilities

Early on the fall semester, I assigned an origin essay in which I asked students to construct a narrative and apply the elements of storytelling to a personal memory that represented their disciplinary choice. Some students wrote about the moment they officially chose their major, while others reached farther back and related an experience from when they first became interested in the subject of their discipline. Cody Keith chose to write his origin essay about hunting for trilobite fossils in the outcrops in the Wheeler and Marjum formations near Delta, Utah.

Cody begins the main narrative with a recent memory: looking at the shelf in his childhood house and seeing a trilobite he found on the trip. Cody uses the object as a means of triggering the main narrative, which creates an immediate connection between the past and the present, a choice that suggests that Cody is drawing upon his autobiographical self. As he describes the shelf, he makes a comment about his own identity in relation to it:

I look at the shelves in my room to see if anything is out of place. By this, I do not mean I am checking to see if anyone messed with my belongings, nor am I concerned that something may have broke in the large earthquake that shook the house while I was away. No, I am looking to see if anything is out of place on my shelf, whether anything no longer belongs there, whether the shelf no longer reflects upon a growing and changing owner. Everything belongs: my identity remains the same as when I left to begin my second semester of college two months previously, a heartening truth.

When giving feedback on the paper, I highlighted the phrase “remains the same” and asked a question relating to the way Cody positioned his identity in the paper: “Based on the appearance of your shelf, or your own examination of your identity? Could a change in identity also be seen as ‘a heartening truth’?” I also noted in my comments at the end of the paper that there was more room to include reflection on the chosen memory, and I asked additional prompting questions, suggesting a direction for development of reflection: “How have you taken the interest you inherited from your father and made it your own? Where do you hope to take that interest from here? There's room here to look at the trilobite both as a reminder of your past and an indication of your future.”

My goal in writing was to encourage Cody to consider how this moment shaped his identity beyond its influence on his past, and to prompt him to see his petroleum engineer identity as still in development. Based on the focus on constancy in his opening, and the return to it at the end, where he notes in his final sentence, “that trilobite definitely belongs there, and will likely remain so for the rest of my life,” I saw Cody as presenting an unchanging identity. The essay suggests that he has chosen his path and the only step left is to fulfill that role, to keep checking back with the trilobite to make sure his interest and goal is constant. In other words, Cody presents a “static” disciplinary identity, which has already been formed and which anticipates a specific, unchanging possibility for self-hood. The static nature of his identity does not present ways in the writing to adapt to new information or new roles in the petroleum geology field.

So using my own multiplicity of disciplinary identity, I guided Cody based on external expectations for creative nonfiction, in which the narrator often interrogates the self, asking questions without easy answers. I wanted Cody to work in a genre new to him by complicating

and deepening the reflection. As an instructor, I considered my hopes for Cody beyond the class, and thought about how a closer, more critical examination of identity could benefit him as he crafted his own way of engaging with petroleum engineering. The principles of narrative offered this opportunity because they allowed him to connect current discursive questions of identity to the materiality of past frustrations, like the physical resistance of allergies, winds, sunburn and parental expectations that act against him in the origin essay. Yet the essay resolves rather than complicates the conflict between the autobiographical self and the possibilities of self-hood, as eventually Cody does find the trilobite, which is proclaimed “the find of the day.”

Early on in the essay, Cody is frustrated about not living up to his “professional geologist and amateur paleontologist” father, who acts as his mentor and role model. However, his fears are alleviated after he finds the trilobite, and he draws upon his success, in a sense, to prove his membership in the petroleum engineering field. I wondered, after reading, how the conflict of the trilobite search translated into Cody’s current state of disciplinary becoming. So as I spoke with him and provided feedback on his origin essay and the following writing assignments, I called attention to his discursive self, or his portrayal of disciplinary identity, and his autobiographical self, challenging him to represent a more complex discursive voice that reflected his progress in disciplinary becoming.

I structured the course so that the final multigenre assignment built off of the midterm paper, which required students to break down the elements of a problem in their field and then present a possible solution to an academic audience. For the multigenre paper, students were required to explore a narrow topic in their field that related to the problem they had posed in the midterm paper, this time addressed to a general audience. One student, for example, wrote about the problem of delivering clean water in her academic audience paper, and then transformed that

topic into a multigenre paper focused on her childhood experience of drinking source water. Many students built on their origin essay, using it as the foundation of their multigenre project, and though not required, many of the final multigenre projects answered in some way the student's question of disciplinary identity.

By structuring the course in this manner, I first emphasized the idea that student authority, though burgeoning, played an important role in learning rhetorical skills. Secondly, students had the chance to take overlapping disciplinary material and place it in a variety of contexts, considering how both the genre conventions of their field and genre conventions outside their field could influence their contributions to the disciplinary discourse community. By moving from an academic audience to a general audience, and shifting genres to adapt to shifting expectations, students were able to understand the conventions of their discipline more fully by understanding what changed when they stepped outside of it, and were also able to challenge disciplinary genre conventions by drawing on storytelling and "creative" genre techniques.

For the final one-on-one conference of the semester, I met Cody Keith to discuss his final capstone project, the multigenre paper. Cody mentioned that he wanted to build off of his academic audience paper directly and continue to address the central problem of that paper: whether or not drilling should be opened in the Arctic National Wildlife Refuge (ANWR).

"That's definitely relevant to our area," I said. "How are you going to approach that from multiple genres?"

"I want to use poetry, and creative nonfiction, of course, since it's required...other than that I'm not sure, maybe a newspaper article?" Cody pulled some papers out of his backpack. I had asked students to bring a sample of one genre they wanted to explore to their conference.

Cody brought three. The first was a creative nonfiction piece that narrated Cody's experience visiting an oil rig, the second was a poem modelled on the two parallel sides of the debate, and the third was a series of notes from a class lecture he had attended on petroleum engineering ethics and safety. I focused in on the last genre in particular.

"Consider here," I said, "what you're adding to this lecture, and how it contributes to the whole. Maybe if you included more reflection in between the professor's comments, then the reader would get more of a sense of who you are, and have another perspective on this issue. For example, the professor mentions here that engineers are 'professionally obligated' to protect the environment as much as possible. Is it just that, or..."

"I can see that," Cody said. "I like that idea. I don't think it's just that we should do this to keep the company's reputation intact. It's a good thing to do either way."

"What do you think is important to communicate to your audience in this paper?" I asked.

"I mostly want people to see both sides of the debate," Cody answered, "and to understand how technology had progressed in the petroleum industry. Some of people's fears will be answered if we just wait until the technology's good enough to do this safely. That's not far down the road."

As we talked, I posed hypotheticals about the "other side" Cody brought up, asking him to consider what writing methods would best reach an audience opposed to ANWR drilling. After considering his options, Cody responded, "Yeah. Mainly I don't want people to think that I hate the environment." He went on to describe the assumptions he perceived people made about petroleum engineers, explaining that he didn't want to be associated with irresponsibility.

Cody's comment struck me, particularly in the way that he phrased it. He sensed a conflict between his own identity and the identity associated with petroleum engineers, though

he recognized the second identity as faulty and constructed. Cody saw his identity as negatively shaped in that it was shaped by how he *didn't* want to be perceived. He resisted the identity that those outside of his field had given him, and thus resisted the constraints of the possibilities for self-hood of the petroleum engineer.

For his final multigenre paper, Cody composed a poem that represents both sides of the ANWR debate. In the poem he places each side on its own half of the page to show the parallel between the economic concerns of petroleum engineers interested in drilling for oil in the area and the environmental concerns of those who oppose exploration in the area. He also uses parallel language like, “Rock pregnant with reserves of liquid gold” and “Caribou mothers pregnant with young,” making it his goal to depict the “back-and-forth” of the debate, as he mentions in his introduction. He reaches outside of conventional petroleum engineering genres, instead drawing on poetry to position a disciplinary issue in a new way in this assignment. His introduction also reflects a blend between the field he is pursuing and a perceived external force critiquing the petroleum engineering field:

As a petroleum engineering student, I have a unique perspective on this issue I hope to convey. I recognize and share many of the concerns of the general public in regards to petroleum production, yet my studies have exposed some of the misconceptions commonly held against the industry. To this end, one of my professors' lectures discussed some of the myths regarding the industry as well as the ethical guidelines of a petroleum engineer. At the same time, many of the environmental concerns are quite justifiable; indeed, the back-and-forth discussions regarding the risks and rewards of production in sensitive areas, such as the Arctic National Wildlife Refuge, parallel each other in an almost poetic fashion...I hope this work will provide the reader with a more

accurate understanding of the mindset of the oil and gas industry and that the reader will reevaluate their preconceptions about the industry regardless of whether their opinion on the topic is altered.

In this passage, Cody establishes himself as a representative of the “mindset of the oil and gas industry,” which lends authority to his discursal self. In the opening he still represents himself as a “petroleum engineering student” rather than stating that he is in the petroleum engineering field, but it is this identity that gives him a “unique perspective.” In other words, he is not yet in the industry, where he might have to make a choice on whether or not he would actively advocate or participate in drilling in ANWR, so he can weigh both sides, with the added benefit of the knowledge he has gained through his coursework.

What is especially striking about Cody’s multigenre paper is that he chooses largely nonfiction genres—such as the personal creative nonfiction essay, a letter, a newspaper clipping and “class notes”—to portray the increased focus on safety in the industry and to dispel myths surrounding the industry’s irresponsibility. However, when representing the environmental perspective, he chooses poetry. Cody seems to reach for established genres when defending or defining the discipline, as all except the creative nonfiction piece (which was required for the assignment) are genres that petroleum engineering already traditionally draws on and communicates through. A student of petroleum engineering would likely read newspaper articles about safety issues, would study professional letter communication and is already engaged with class notes.

In other words, Cody integrates his petroleum engineering student identity readily into texts that fit with the definition of the field he’s been given and reaches for genres outside his discipline when bridging the gap between the petroleum engineering audience and the

environmentalist audience. This strategy allows him to separate his concern for the environment from his petroleum engineering identity, as he can narrate the issue as the petroleum engineer sees it, and then as the environmentalist sees it without merging or directly comparing the two views of the situation. Though in his origin paper Cody subsumes his autobiographical self into the possibility of self defined by the petroleum engineering field by privileging personal consistency over malleability, in his multigenre paper he separates his autobiographical self from the possibility of self in moments of potential conflict.

One portion of Cody's multigenre paper illustrates his position as a student in the petroleum engineering field particularly well: The "class notes" genre that we discussed during his conference, which began as a re-write of a lecture he attended where the professor broke down the myths about petroleum engineering majors. The genre includes direct quotes from the lecture, so the information originates from a person Cody considers an expert in the field. In the final revision he turned in, Cody drew on the suggestions I made during his conference, placing italic "stream of consciousness" responses in between sections of the professor's lecture. The responses range from in-the-moment observations about being out of coffee to a particular reflection on the comment we had discussed—the professor's explanation that petroleum engineers are "professionally obligated" to do the best they can to "prioritize the safety of the environment" in order to maintain the good image of their company. In his response, Cody replies to this with uncertainty:

Professionally obligated, huh? It seems like we would want to protect the environment anyway, I mean, I don't want to be a villain in the world. I love going out and enjoying nature; I am not going to be the guy who ruins the land. It's good to know that my own perspective matches the interests of the industry.

In order to define his professional field and the industry associated with it, Cody uses the lecture as a source of authority in the paper. Once the boundaries of that field have been established, Cody expresses that he finds his own interests aligned with the petroleum engineering interests, but with a difference. He separates his own rationale for this interest from the “accepted” rationale the professor presents, juxtaposing an interest in protecting the environment with personal fears of being negatively perceived (“I don’t want to be a villain,” “I am not going to be the guy”) as well as personal investment (“I love going out and enjoying nature”). Cody doesn’t return to this difference in the rest of the paper, suggesting that the resolution in this statement effectively clears up the issue, at least for the positioning of the petroleum engineering student identity in this paper. That conclusion suggests that Cody is satisfied as long as the interests of his autobiographical self are aligned with the industry’s interests, even if the underlying rationale behind each of those interests differs radically.

The genre of the italic lecture “thoughts” restricts Cody’s observations on his professor’s lecture to short, recreated stream-of-consciousness snippets. By placing the observations next to comments like “I need more coffee,” their impact and seriousness is lessened, and it provides an indirect way for Cody to perform his student identity, which could be perceived as a means of undercutting the authority of the discursal self. Cody chooses not to take a stance on engineering responsibility here, but simply raise the question. The choice could indicate that Cody sees this conversation about whether petroleum engineers *should* be dedicated to the environment as beyond the scope of the paper, and chooses not to discuss whether an environmentalist outlook is reconcilable with a petroleum engineering disciplinary identity. The genre choice and revision could also indicate that Cody does not want to undermine the authority of his professor, an expert in the petroleum engineering field, by giving equal space to his own

thoughts or by representing them using a genre with more vested authority, like the lecture or the research paper. Either way, the italic sections in this genre show Cody experimenting with several identities at once. He represents himself as a student who can “go take a midafternoon nap” after the class is over, but also comments on his own membership in the field by mentioning potential for employment in relation to oil prices (“*Given how poor the price of oil is right now, we are all likely to be unemployed engineers*”) and his membership in an engineering organization, the Society of Petroleum Engineers (“*What was that he said about SPE? That reminds me, I will need to submit my paperwork to earn membership*”).

Cody shifts between student, future professional, Alaskan and environmentally-concerned citizen identities all within the course of a sentence by adopting this stream-of-consciousness-type model, suggesting that he is dealing with this negotiation daily, even when attending a lecture in his field. He demonstrates excitement related to new technology in the industry, questions the wording of a central guideline of the SPE and also expresses a sense of boredom. Cody begins to inhabit a more “malleable” identity in this section, meaning that he sees identity as composed of shifting parts, noting that he is yet to become a SPE member or an “unemployed engineer,” but that these are possibilities of self-hood that he holds in his future. The italic thoughts represent an engineering student adaptable and ready to change, even if that change means questioning the expert authority.

In relation to the ANWR debate, Cody found it was more difficult to integrate his autobiographical self with the possibility of self-hood that he perceived his professor suggesting: that petroleum engineers are motivated solely by the goal of preserving their company’s reputation. Throughout the paper, Cody’s shifts in genre also represent a negotiation between the autobiographical self and the possibilities of self-hood. He seeks to draw on disciplinary texts

like his professor's lecture and the "engineering code of ethics," but he also inserts texts that reach outside the discipline in order to represent his own view of the situation and the responsibility petroleum engineers have toward the environment. In addressing "the other side," or the audience members who have environmental concerns, Cody also constructs a bridge between his own environmental concerns and his desire to fit the petroleum engineer identity.

For another of his genres, Cody includes a letter written from the perspective of a fictional concerned environmentalist responding to the Macando oil blowout in his multigenre paper, writing directly from the other side of the debate. My feedback on the letter was in part to make the argument stronger using specifics, and to draw on the techniques Cody used in depicting the safety measures put in place to also clearly outline the environmental argument. However, the genre that immediately follows this letter in the paper is a mock-newspaper article that highlights improvements in safety made in response to Macando, and then a creative nonfiction essay that details a trip he took to an oil rig, which meticulously outlines the safety precautions required of visitors and workers. The resulting effect, for the reader, is an argument that admits the risks of drilling and oil exploration, but emphasizes the comprehensive safety measures present in the field which are constantly improved and evaluated. Therefore, the gaps between genres ultimately give Cody the chance to explore his environmental concerns in order to address a portion of his audience, but his final sentence, "The petroleum industry has grown and adapted over the past century and will continue to do so, ensuring that as long that there is available petroleum resources and a demand in the market, a safe and ethical method will be found to produce it" places him in direct agreement with the possibility of self-hood established by the industry.

As an instructor, I recognized several factors influencing my assessment of Cody's essay. First, as an environmentalist myself, I acknowledged my own disagreement with the premise that as long as the market demands oil, the only responsibility petroleum engineers have is to find the best "safe and ethical method" possible for producing it. Secondly, I saw Cody develop more of a connection between his autobiographical self and the possibilities for self-hood related to petroleum engineering in the class as a whole. Finally, I saw how Cody had engaged in disciplinary becoming, but still had room to develop and interrogate his own stance on the environment and the petroleum engineer's response. As I perceived moments of resistance in Cody's writing and analyzed his redefinition of precisely *why* engineers should focus on safety, I also saw movement toward a more malleable, more development-focused sense of identity. Though instructor expectations and perception of the first-year writing classroom as an exploratory, even environmentalist, space could affect this move, Cody still underwent the experience of writing an effective argument from the other side and connecting with an audience whose identities clashed with his own possibility for self-hood.

This case illustrates that students sometimes perform a complete melding of autobiographical selves and possibilities of self-hood because of their understanding of an assignment. This is useful information for first-year writing instructors, because it is important to be aware that the holistic self presented on paper may not reflect the student's actual perception of their own identity. Also, there are opportunities for instructors to encourage student writers to interrogate and complicate their identities in the texts they produce. By doing so, instructors can help students break the feeling that they are performing an identity unlike their own when engaging in disciplinary texts. Providing a space for a thorough exploration of disciplinary identity in the writing classroom can aid the student in negotiating between their own experience

and their disciplinary future, and that space can also help the instructor negotiate between the goals of the writing classroom and the students' disparate disciplinary identities.

Discussion

Cody Keith's paper reacts to a variety of interests and values associated with the petroleum engineering possibility for self-hood. He begins his origin essay with a reference to constancy and reliability, which is represented by the trilobite. That first reference to his autobiographical self aligns closely with the perceived possibility for selfhood in the field, and the trilobite is a fitting metaphor for this view of disciplinary identity. In this case, disciplinary identity is formed through interest at a young age and is maintained despite challenges and trials, keeping a constant form like the fossil. The trilobite is an index fossil, which means that it is used to date other fossils, and is dependable because it is abundant and is associated with particular time periods. The static disciplinary identity works in much the same way: it fits a perceived hole in the field, and can be relied upon because of its constant form.

The petroleum engineering discipline is unique in that most of its students follow one particular career path: working in the petroleum industry for an oil company. Employment is determined largely by oil prices, and as oil prices drop, concern among those in the major rises. Questions arise about whether the disciplinary identity encouraged by the degree is too static, and doesn't allow for a change in perceived future possibilities. Furthermore, the ongoing debate between environmental responsibility and economic stability results in the continued re-negotiation of what being a petroleum engineer means.

After examining the change from Cody's origin essay to his final multigenre paper, it is apparent that he began to engage more in these overarching conversations. The interplay between genres suggests interaction, if not integration, of the environmental perspective and the

economic, or industry perspective. Cody suggests possibilities for future technological improvements, and also references the possibility of everyone being an “unemployed engineer.” Though he states that this is not a heartening truth, he also admits the possibility of a need for flexibility at the same time. The genres allow for the “double-voiced” quality that Ivanič refers to, wherein Cody assumes both an environmentalist and a petroleum engineer perspective, and explores two possible futures: one where he is a petroleum engineer working in the industry, and another where he is a petroleum engineer seeking another outlet for his skills. The focus on industry safety in the last two genres suggests that the negotiation between aspects of the self is ongoing.

However, even though the final line of the paper fits with a static possibility of self-hood suggested by the industry (“The petroleum industry has grown and adapted over the past century and will continue to do so, ensuring that as long that there is available petroleum resources and a demand in the market, a safe and ethical method will be found to produce it”), it still co-exists with the final line of the letter written from the perspective of a fictional environmentalist: “Perhaps it is time to consider other alternative energies to decrease our reliance on oil, given how dangerous its production can be.” The coexistence of two opposing, and irreconcilable, goals suggests a comfort with uncertainty that is consistent with a malleable disciplinary identity, one that is open to both transfer and interdisciplinary discourse.

Conclusion

A year after he took my course, I asked Cody to come in and chat about how he felt about petroleum engineering now that he was further along in his academic career. He had added another major to his degree—Geoscience—and was working as an undergraduate TA under a petroleum engineering professor. As he talked about the field, Cody became animated and delved into descriptions of reservoirs and fracking processes. When I drew his attention to

phrases in his original origin essay, he reflected that his underlying interest in and fascination with geology was what had remained most constant. I brought up the metaphor of the shelf that he used in the paper, asking him whether he still thought of his identity in that way.

“For starters, my parents remodeled my old bedroom and that shelf isn’t there anymore,” Cody joked. “So it wouldn’t work if I wrote about it now.”

I pointed to the phrase, “Everything belongs: my identity remains the same as when I left to begin my second semester of college two months previously, a heartening truth,” and asked Cody if he still felt that way. He thought for a moment and then replied that he would expand on the phrase “a heartening truth,” adding that he now saw a change in his identity, and thought of that change as more positive than a static shelf.

“I’ve changed so much in just the past year,” Cody said. “Academically, socially.”

“If you were to use that shelf metaphor now, how would you update it?” I asked.

“The trilobite would still be there, to represent my love for geology. And I’d probably keep the shelf, but maybe I would describe how the contents of it changed and moved around.”

Cody’s update to the metaphor reveals the novel blend between a conception of static and malleable portions of his identity. The trilobite acts as a representation of the central value he places in geology, and his interest in the field, which has remained constant. The autobiographical self—his connection to his father’s field and his background in his discipline that was established before entering the university—is the shelf itself, which is also constant, and sets the groundwork, the point of reference for future disciplinary becoming. The shifting objects around these constant points are Cody’s possibilities for selfhood, and the ways in which he chooses to arrange them form his discursal self.

As I asked Cody about how he saw his identity in his field changing, he mentioned that he had several career options in mind, and was also considering getting a master's degree. For now, he focuses on school, and has chosen to take an extra year for his added geology degree in order to extend his time in the university space.

“But I'm starting to imagine myself in the office setting,” Cody said, revealing a willingness to perform both professional and student identities while acknowledging a difference between the two.

Ultimately, my conversation with Cody revealed an ongoing negotiation of disciplinary roles and responsibilities, as well as an increased authority within the field. The texts Cody produced acted in concurrence with his overall disciplinary becoming, reflecting a change from a need to depict the self as constant, to a willingness to depict negotiation and contradiction. The reflective space of the narrative, non-disciplinary specific text provides a chance for the writer to make choices informed by that ongoing negotiation, acting as a point of reference in later stages of disciplinary becoming. These texts allow writers to explore disciplinary possibilities of self that resist established practices, and by comparing the discorsal self of the non-disciplinary specific text to the discipline-specific discorsal self, the student writer can see a range of identities in writing.

Further study on the disciplinary self in writing courses, as well as longitudinal studies that examine ways that disciplinary identity changes over the course of the student's educational career, and how that extends to the workplace beyond the university, could shed more light on the shifts between static and malleable identity. Over the course of the student writer's life, certain aspects of identity may be used as static anchors that allow for more malleability in other areas. The reflective, identity-focused writing curriculum provides a fruitful space of exploration,

and instructors have the opportunity to show writers how their disciplinary identity can evolve, while also empowering them to shape their discipline through their involvement. For the student writer, keeping the selves of different texts in conversation, while not trying to reconcile them or subsume one into the other, is an ongoing practice in the process of disciplinary becoming, one which encourages transfer and requires malleability.

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Appendix



(907) 474-7800
(907) 474-5444 fax
uaf-irb@alaska.edu
www.uaf.edu/irb

Institutional Review Board

909 N Koyukuk Dr. Suite 212, P.O. Box 757270, Fairbanks, Alaska 99775-7270

March 24, 2016

To: Sarah Stanley, PhD
Principal Investigator

From: University of Alaska Fairbanks IRB

Re: [874766-1] Connecting the Humanities to the Sciences: Resistance in the Classroom

Thank you for submitting the New Project referenced below. The submission was handled by Expedited Review under the requirements of 45 CFR 46.110, which identifies the categories of research eligible for expedited review.

Title:	Connecting the Humanities to the Sciences: Resistance in the Classroom
Received:	March 9, 2016
Expedited Category:	7
Action:	APPROVED
Effective Date:	March 24, 2016
Expiration Date:	March 24, 2017

This action is included on the April 6, 2016 IRB Agenda.

No changes may be made to this project without the prior review and approval of the IRB. This includes, but is not limited to, changes in research scope, research tools, consent documents, personnel, or record storage location.