Examining the Disciplines as Cultures: An Anthropological and Linguistic Perspective

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In a small café in Casablanca, a friend of mine once tried to order a chai tea latte. The waiter spoke French and Arabic, perhaps Berber as well, but we did not inquire. My friend spoke English and Spanish. She tried repeating herself and speaking more slowly, but the language barrier was insurmountable. She even tried using a translation app on her phone, but the issue was only compounded as 'chai' is simply the Hindi word for 'tea.' The entire interaction was rather comical as she grew increasingly frustrated, and the waiter's patience began to wane. She ended up with a regular cup of tea, a small glass of milk and several packets of sugar.

Unfortunately, frustrations created by language barriers and cultural differences are not limited to coffee shops in Casablanca. We see them anywhere that two cultures collide. This is true of academic cultures as well. Since C.P. Snow's 1959 lecture, "The Two Cultures," academics have been engaging in discussion of the existence and extent of the differences between the fields of the sciences and the humanities. Snow chose to title his lecture with great intention. He arrived at the quantity he chose because, "the number 2 is a very dangerous number" (Snow, 1959, p. 9). Snow openly admitted during his lecture that the social sciences have a convincing argument to be considered separately from the physical sciences (p. 9), and of "the literary intellectuals, there are all kinds of tones of feelings" (p. 11). The number given in Snow's title is then up for debate, but that will not be the focus of this paper. Instead, the focus here is on the word 'cultures.' The disciplines are indeed as fundamentally different as foreign cultures. If interdisciplinarians took a few pages from the playbooks of anthropology and linguistics, our work could be more efficient and profound. This paper intends to frame the interdisciplinary work of bridging the disciplines as connecting 'cultures,' and, in so doing, bring findings from the fields of anthropology and linguistics into the conversation.

Defining Culture

To many, the word 'cultures,' as used by Snow, has been seen as a stand-in for 'disciplines,' 'groups' or 'fields of study.' While he certainly refers to each of these when he uses the word 'cultures,'

none of these placeholders encapsulate the meaning nor carry the connotations intended by Snow when he says 'culture.' "The scientific culture really is a culture, not only in an intellectual way but also in an anthropological sense" (Snow, 1959, p. 9). There can be no doubt then that the differences between the sciences and the humanities are to be understood as a cultural divide.

Treating the disciplines as cultures requires that the term 'culture' itself be defined. "A culture is a body of informal knowledge that is historically inherited, transformed, embodied, and contested in traditions, incorporated and innovated in practices, and transmitted, altered through social learning, in a community of evolving and porous boundaries" (Li, 2007, p. 155). This definition considers four pillars of culture: history, traditions, practices and community. Both the humanities and sciences have their own unique history, traditions, practices and community. Therefore, they can be understood as cultures in and of themselves.

When two foreign cultures encounter each other, there is often confusion and misunderstanding. Snow found it to be the case, in his time and geographical context, that the cultural divide between the literary intellectuals and natural scientists was so great that "their attitudes are so different that, even on the level of emotion, they can't find much common ground" (Snow, 1959, p. 4). Such a disconnect again points to the need for a cultural approach to bridging the gap between the disciplines.

An Anthropological Perspective

Some might argue that no cultural divide between the disciplines exists, that they have more in common than not. One such voice in favour of this argument is that of Jacob Bronowski, a mathematician and advocate of poetry. One example he provides comes from his field of expertise. He argues that "pure mathematics is a form of poetry, which has the same relation to the prose of practical mathematics as poetry has to prose in any other language" (Bronowski, 1956, p. 2). To the casual on-looker, this seems to be an absurd assertion, and reasonably so. However, looking at this absurdity through a cultural lens can help to better understand where Bronowski is coming from. A concept taken from the field of

anthropology that can shine light on Bronowski's equation of poetry and mathematics is cultural relativism. Cultural relativism is the idea that any expression made in the context of one culture (C1) cannot be fully understood by an on-looker in a different cultural context (C2).

Before explaining further how cultural relativism can be used to examine the disciplines as cultures, it is worth dispelling a common misconception. Cultural relativism is often erroneously equated with ethical relativism in both popular culture and in academic writing. Xiaoron Li's "A Cultural Criticism of Cultural Relativism" is a prime example of this confusion of terms. Her main argument, one that nearly anyone would agree with, is that cultural relativism should not be used to justify violations of human rights, but her paper would be better titled "A Cultural Criticism of Ethical Relativism." Cultural relativism takes no moral stance of right or wrong; it simply acknowledges that no aspect of a culture can be understood without being a member of that culture. A quick example from popular culture would be a rivalry between sports teams. Fans of the Boston Red Sox for example might equate their rivalry with the New York Yankees to the rivalry between F.C. Barcelona and Real Madrid. However, cultural relativism claims that these fans cannot truly understand the other as they are not a part of that group. Indeed, the geopolitical friction between Barcelona and Madrid makes this rivalry substantially different from that of the Red Sox and Yankees.

Bronowski, to continue this example, is essentially a man who grew up in Madrid, but has lived in New York now for some time. He can see how intense both rivalries are yet appreciating their distinctions as a member of both cultures. To drop the metaphor, he is fully immersed in both the worlds of poetry and mathematics and is therefore able to see and appreciate the similarities the two cultures share. Even so, mathematics and poetry are still two entirely different cultures, each with their own history, traditions, practices and community.

On the opposite side of the spectrum from cultural relativism lies ethnocentrism. Ethnocentrism is the belief, explicit or implicit, that

one's own culture (C1) is the correct culture and differences of other cultures (C2) are strange and often wrong. From the ethnocentric perspective, in an ideal world, all other cultures would assimilate into C1. Ethnocentrism can be found in any culture, especially in individuals who have had little to no contact with other cultures. This is true in the realm of academia as well. C. Wright Mills, a leading social scientist of his time, points out that "philosophers who speak in the name of science often transform it into 'scientism,' making out its experience to be identical with human experience, and claiming that only by its method can the problems of life be solved" (Mills, 1959, p. 16). In the same publication, Mills goes on to discredit literature and physical sciences as less useful methods that have had their day. He asserts that "the social sciences are becoming the common denominator of our cultural period, and the sociological imagination our most needed quality of mind" (Mills, 1959, p. 13). These ethnocentric approaches to other cultures will lead to the same divisions between disciplines as they do to cultural people groups.

One field that is working to combat the cultural divide between the sciences and the humanities is that of interdisciplinary studies. Although he uses different terminology, William H. Newell also expresses fear of ethnocentrism within the disciplines. "When students are thoroughly grounded in a discipline before becoming exposed to interdisciplinary studies, they tend to become indoctrinated into its world view, uncritically accepting its often implicit assumptions" (Newell, 1983, p. 4). Newell advocates for interdisciplinary studies to be taught as early as freshman year of college, or even in high school, to avoid the risk of indoctrination by a single discipline. Even if his advice is ignored, however, the battle for interdisciplinarity will still not have been lost. Professionals and intellectuals who are indoctrinated in their ways face no more obstacles to interdisciplinary work than any individual who wishes to step out of ethnocentrism and adopt a perspective of cultural relativism. This is by no means an overnight process, but it is in fact an endeavour that many have undertaken. Julie Klein outlines a ten-stage process, which she adapted from Sverre Sjolander, in which the transition to interdisciplinary work takes place. The cultural barriers created by the ethnocentric viewpoint are not addressed until step eight and not overcome until the ninth step in this series. The

ninth stage, which she calls "getting to know the enemy," consists of "moving towards more in-depth knowledge of other disciplines not only for the sake of the immediate project but also getting to know the general structures, principles, and ways of thinking in other disciplines" (Klein, 1990, p. 72). She titles the tenth stage "the real beginning" which goes to show that until one culture is able to look at an issue from the perspective of the other, no intercultural nor interdisciplinary progress can be made. If specialists engaging in interdisciplinary work were made aware of their own ethnocentric biases and introduced to the concept of cultural relativism from the start, perhaps the process of interdisciplinary work could be streamlined, and many of Sjolander's ten steps could be avoided or mitigated.

The Impact of Language on Culture

Culture and language are in a constant state of push and pull. Language influences culture as it is simultaneously sculpted by it in reciprocity. It is tempting to say that there is no limit to how influential language is to our thoughts and, in turn, our culture. However, such a statement would be an egregious hyperbole. Language does have its limits in regard to its influence over our thoughts. The two main ways in which language impacts culture are via linguistic relativity and language barriers.

Linguistic relativity, also known to many as the 'Sapir-Whorf Hypothesis,' is "the proposal that the particular language we speak influences the way we think about reality" (Lucy, 1997, p. 291). Multiple studies have shown that an individual's language impacts his or her thought process. One of the most captivating examples of such linguistic differences is how different languages refer to space (left, right, north, south, uphill, downhill, etc.). "Speakers of modern European languages tend to favor the use of body coordinates to describe arrangements of objects (e.g. *the man is to the left of the tree*). For similar situations, speakers of other languages such as Guugu Yiirimithirr (Australian) and Tzeltal (Mayan) favor systems anchored as cardinal direction terms or topographic features respectively (e.g. *the man is to the east/uphill of the tree*)" (Lucy, 1997, p. 300). The result of this drastic linguistic variation is that

“speakers of languages preferring extensive use of fixed coordinates show more accurate dead reckoning skills when asked to indicate the direction of familiar locations from an unfamiliar site” (Lucy, 1997, p. 301). In other words, native speakers of Guugu Yiirimithirr or Tzeltal would have better directional skills than most speakers of European languages because their languages require them to keep track of their relative location. Similarly, might the language used within different disciplines influence how experts in their fields think? Could the frequency with which scientists speak and write with words of precision and quantity, or poets of love and betrayal, cause them to be constantly thinking about such things? Could that very constant thought result in each being better equipped to address problems within their field of inquiry?

A different study found that languages with grammatical gender may be reflected in how speakers of that language view object. “For example, the word for ‘key’ is masculine in German and feminine in Spanish. German speakers described keys as hard, heavy, jagged, metal, serrated, and useful, while Spanish speakers said they were golden, intricate, little, lovely, shiny, and tiny” (Boroditsky et al., 2003, p. 70). The same study also tested the word ‘bridge,’ which is masculine in Spanish and feminine in German. The results were similar, with Spanish participants using words like strong and sturdy while German speakers used terms like beautiful and slender. The results of this study show the influence that one’s native language might have on thought. Is it possible that the language used in each field of study leads to subtle biases?

The impact of language on thought can be observed anecdotally as well. For example, many guides at Mount Everest did not know that they had been giving tours at the same mountain under which they grew up because that mountain went by a different name in their home valley. “One of the difficulties which the Sherpas have in seeing Everest is that the mountain goes by different names in different valleys” (Bronowski, 1956, p. 32). Because it went by a different name, they assumed it was a different mountain and never gave thought to the idea that it could be one in the same from a different perspective. It should be noted that once it was pointed out to the sherpas, they had no difficulty understanding that it was the same mountain seen from a different face. This story from the

Himalayas gives hope for the work of interdisciplinarity. Prejudices that have been established or reinforced by language can be overcome with new information and an open mind.

Perhaps even more impactful on the development of culture than linguistic relativity, are language barriers. As the anecdote at the beginning of this paper pointed out, cultures that speak different languages require more than good intentions to understand one another. Time must be taken to learn the other's language if productive communication is ever going to take place. The same is true, though thankfully to a lesser extent, of communication between different disciplines. In the ten stages of an interdisciplinary project mentioned earlier, colleagues do not even attempt to bridge the language barrier until the fourth stage, "*the definition sickness*" (Klein, 1990, p. 71). Waiting too long to break through the language barrier will result in talking past the other culture instead of fully communicating each culture's thoughts. There are drastic differences in the lexicons of the disciplines; for example, the word "theory" in the humanities is more akin to the word "hypothesis" in the sciences. More technical terms pose an even greater language barrier, as what one discipline considers to be entry-level, common knowledge, another discipline may have never heard before. Take terms like 'linguistic relativity' and 'cultural relativism' for example. Snow also observed this in his interactions with literary intellectuals and scientists noting their inability to define terms of the other culture (Snow, 1959, p. 15).

Conclusion

The cultural divide between the disciplines is real. Viewing the disciplines as cultures is more than a metaphor; it introduces new methods of studying and conducting the work of interdisciplinarity. Starting from a perspective of cultural relativism, experts can engage in interdisciplinary projects without the barriers created by ethnocentrism. We can also take lessons from studies regarding linguistic relativity and understand that other cultures might have a heightened awareness of concepts within their respective fields. At the same time, we should try to remain aware of our own biases resulting from our own language and culture. In addition to

accounting for the influence of different languages, we must also take the time to learn the other cultures' languages, to overcome the language barrier. Undertaking this cultural and linguistic approach to interdisciplinary work can streamline communication and better bridge the gap with other cultures.

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