



Kraków, Poland. Photo courtesy of Connor Liskey.

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About the issue

The editors at the University of Michigan Undergraduate Journal of Anthropology are thrilled to present our inaugural issue. The seven original articles that comprise our Spring issue span the four fields of the discipline, demonstrating the great diversity of questions explored by contemporary anthropologists. Margaret Tennis, analyzing the western media's depictions of the 2014 conflict in Ukraine, shows that western news outlets come to unwittingly reproduce ideologies articulated by the Kremlin of a linguistically—and, therefore, an ethnically—divided Ukraine. Nathaniel Costin portrays the practice of palliative care through an account of a single patient's experience with a care team, from his hospitalization in a midwestern hospital until his ultimate death. Apoorva Ram presents a rather different account of western medicine, as she investigates the negotiations expectant mothers make between their desires to have a “natural” birth with the ever-present, highly complex, and sometimes comforting possibilities of biomedicine. Next, Caila Coale explores the architectural elements and societal influences of temples in two very different contexts—New Kingdom Egypt and Early Dynastic China. Alexandra Newton considers the ways in which the twenty-six year long separatist Tamil insurgency in Sri Lanka operated upon aspirations to “re-make” the future into one that could accommodate an independent Tamil nation. Using archaeological and ethnographic evidence for the production of personal ornamentation, Briana Gladhill argues for an evolutionary approach to the trajectory of symbolic behavior. Ariella Hoffman-Peterson articulates the cultural contingencies of the relationship between depression, cortisol, and inflammation amongst women in the Philippines.

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Russian to Conclusions: The Western Media's Ideological Approach to Language in Ukraine

Margaret Tennis, Brown University

Introduction

In this article, I explore how the western media succumbs to common ideological conceptions of language in reporting on the 2014 conflict in Ukraine. In this way, the western media actually unwittingly reproduced a storyline of the linguistic situation in Ukraine that was produced and articulated by top Kremlin officials for political purposes. Through analyzing articles found in major western news outlets it becomes apparent that the media is visibly perpetuating a central narrative about linguistic discrimination and division in that country, without critical reflection or deeper probing of such claims.

Scholarship suggests that such readiness to reproduce claims about language without critique or evaluation lies in a societal tendency to accept ideological statements about language that confuse a superficial ‘common sense’ view of language with fact. For example, journalists reporting about Ukraine throughout 2014 rarely interviewed language experts, yet they frequently incorporated flawed data into their reports, or made sweeping authoritative statements. In her book *English with an Accent: Language, Ideology and Discrimination in the United States*, Rosina Lippi-Green argues that the media as an institution often views itself as knowledgeable enough about language that it need not invite the opinion of outside sources, viewing its own interpretations as accurate. Furthermore, she argues that the media actually views itself as an expert on matters of language, to the extent that it is responsible for educating the public about them. Her analysis concludes that the “media claim authority on language issues and use that authority to coerce agreement on public issues” (Lippi-Green 2011, 130).

Additionally, the public's readiness to accept the media as an authoritative source of information about language enables the media's monopoly on this authority, which in turn enables it to continue its non-critical reporting about language without doubt. As Lippi-Green laments, "[the media] have convinced us they are the authorities and we do not challenge them" (Lippi Green 2011, 130). This lack of challenge ultimately allows narratives about language, like that propagated by the Kremlin in regard to the Ukrainian conflict, to exist in perpetuity. Similarly, Jane Hill's discussion of 'folk theories' about language in *The Everyday Language of White Racism* helps explain why the public does not challenge the media's interpretation and account of language events. Folk theory is Hill's term for society's everyday perceptions of the world, their "undeniable common sense" knowledge that allows them to understand social processes as "just the way things are" and then "interpret the world without a second thought" (Hill 2008, 4). Ideological views of language – for instance, that language groups are bounded and homogenous – fall into the category of folk theories. When people hold such common sense notions about phenomena like language, they are quick to accept claims about these phenomena that fit with their common sense beliefs, or 'folk theories.' In this way, argues Lippi-Green, the public rarely comprehends a distinction between opinion and fact when it comes to language issues (Lippi-Green 2001, xx).

Methodology

I analyzed a number of articles from the western media's coverage of the Ukraine conflict from November 2013 through November 2014 and ultimately included those that were particularly evocative of the trends I noticed in the western media's treatment of language issues. Overall, the western media's reproduction of a narrative about linguistic division and discrimination in

Ukraine is most frequently expressed through 1) declarative, sweeping statements about linguistic division that do not invite critique, including the presentation of often flawed graphics and data as fact, 2) erasure of multilingualism and multi-identity, 3) conflation of identity categories, and 4) conceptualization of language groups as homogeneous, especially in terms of members' interests.

Titles

In my sample, many articles use titles, sub-titles or phrasing that uncritically reproduce the narrative of a linguistically divided Ukraine. The use of titles in this way accomplishes this uncritical reproduction most successfully, because titles naturally do not elicit contextual analysis from the author and result in the reader accepting the title's claim at face value. Indeed, titles seem to be particularly effective at perpetuating the uncritical reproduction of narratives simply because many readers read titles and absorb their message without bothering to read further for a deeper knowledge that could actually prompt them to critique the title's claim. Lippi-Green argues that "ideology is most effective when its workings are least visible" (Lippi-Green 2011, 334). Therefore, the media's general inclination to write provocative and attention-grabbing titles amplifies this phenomenon and further disguises titles' incorporation of linguistic ideology.

An example of a title's uncritical reproduction of linguistic ideology is *Al Jazeera's* February report about the Ukraine conflict: "Ukraine turmoil deepens linguistic divide" (*Al Jazeera* 2014). Similarly, *CNN* ran an article on March 3 titled "A divided Ukraine" (*CNN* 2014). The *Christian Science Monitor* published "Ukrainian vs. Russian language: two tongues divide former Soviet republic" (Weir 2014) on March 15 and *BBC News* published "Ukraine's sharp divisions" on April 23. Each title suggests a divided image of Ukraine, with two specifically

referring to language as the source of this division. The *Christian Science Monitor* and *BBC News* titles in particular ran during a period in which the Kremlin's version of events had begun to solidify into a single storyline about divisive language issues. This period witnessed a few highly public appearances by Putin in which he emphasized such a narrative of the situation in Ukraine.

Subtitles act like titles in generating the simplistic reproduction of certain narratives, especially because they are interpreted as summarizing different portions of an article. Furthermore, subtitles are also subject to face value interpretations by readers. A reader might skim an article, reading the title and subtitles, yet failing to read the text beneath the subtitles when doing so may have allowed them to further contextualize the subtitle's message. Just as titles contribute to common sense internalizations about language claims, subtitles also reinforce the acceptance of statements about language as 'just the way things are.'

Prominent news outlets like *NBC* and the *Washington Post* ran subtitles that reproduced the narrative about a language divide in Ukraine. An *NBC* article from late February, titled "Can Ukraine Avoid an East-West Split and Bloody Civil War?" contained the subtitle, "How divided is Ukraine?" (Jamieson 2014). This article came just days after the Kremlin posted a statement warning about 'purging' of Russian-speakers in the east and a 'ban' on the Russian language by 'terrorists' from the west. It is important to note the role of phrasing in this subtitle. By phrasing the subtitle as a question of extent, the article presents its portrayal of Ukraine as linguistically divided as fact. It does not enable the reader to question 'if' division is occurring, only 'how much.' The reader is only given the autonomy to make up his/her mind about how much division there is, but is precluded from debating its existence. In this manner, language ideology operates

beneath the article's surface and allows for a built-in reproduction of the narrative of Ukraine's language divide. According to Lippi-Green, this subtle operation makes the media a "silent but efficient machine" in prompting readers to unconsciously internalize claims about language until they are transformed into common sense (Lippi-Green 2011, 334). Similarly, a subtitle in a *Washington Post* article titled, "9 questions about Ukraine you were too embarrassed to ask," (Fisher 2013) also contains subtitles phrased as questions. One reads, "Wow. How did Ukraine get so divided?" Again, the author does not pose the question to ask 'if' Ukraine is divided, but rather assumes that point as fact, and presents it in a way that precludes further discussion.

Titles and subtitles are merely the initial way that the narrative about a language divide is reproduced. In the bodies of these articles, writers reproduce the narrative, sometimes only through casual reference and sometimes explicitly. Even the most subtle articulation of the narrative ultimately reinforces its efficacy by precluding engagement or reflection. The aforementioned *Washington Post* article, however, contains emphatic language to make its point: "Here's the thing you have to understand: Ukraine is divided. Deeply, deeply divided by language." By representing Ukraine's language divide as a phenomenon that the reader 'has to understand,' the author not only assumes the existence of a language divide but also attempts to force the reader to accept it. The repetitive use of the word 'deeply' reinforces that conclusion, and essentially forces it down the reader's throat. Of course, this creates a potential for future backfiring, as the reader may be turned off by such hyperbole, and perhaps skeptical of the melodramatic language involved.

Similarly, an article in *The Moscow Times*¹ from October 2014, after the Kremlin's storyline had matured and increased its focus on language, also framed Ukraine's linguistic divide as 'deep.' The article, titled "Language Continues to Divide Ukraine," (Kupfer 2014) includes the text: "a divided Ukraine is a vulnerable Ukraine. This tiring old linguistic battle only weakens the Ukrainian state." This description portrays the unchallenged notion of a language divide in Ukraine as entrenched, and also as violent, by calling it a 'battle.' The text's focus on describing the linguistic divide, instead of investigating whether this divide exists at all, precludes the reader from questioning that claim. Instead, the reader's attention is shifted to the negative implications of a fictional situation that is framed as factual from the start. Finally, the *BBC News* article also used strong language to reproduce the narrative about a language divide. In fact, it characterizes this divide as tearing the country apart: "[Ukraine] has been torn between east and west...this is reflected in a cultural and linguistic divide" (*BBC News* 2014). The article reproduces a notion of Ukraine as containing two linguistically and culturally opposed geographic halves. It also suggests the occurrence of violence through the use of the term 'torn.' But a portrayal of Ukraine as divided into distinct cultural-linguistic blocs oversimplifies the diversity of the country, as well as people's tendency in Ukraine to identify in multiple, overlapping and seemingly contradictory ways. Furthermore, it ignores the widespread multilingualism of the country by suggesting that the West and East speak different languages, when in reality the linguistic situation is much more complex.

But why is a simplistic portrait of the linguistic situation in Ukraine so easily reproduced?

¹ The Moscow Times is an English language daily newspaper aimed at an international audience, and owned by a Dutch media conglomerate. It is not operated by the Russian state, but rather should be considered a member of the Western media.

According to scholars writing about language ideologies, the answer is essentially that society prefers orderly, structured representations of social processes and the social world. Ideological views of language, like those conceptualizing languages as distinct, and geographically determined, support this structure. Hill argues that people accept language ideologies “because they make their world more coherent and comprehensible” (Hill 2008, 34). But the reality of language in Ukraine — how it overlaps, evolves and rarely adheres to a prescribed standard — is messy and confusing. Attempting to wrap one’s mind around this complexity requires attention and education. Furthermore, it necessitates accepting that language is fundamentally shaped by the actions of people. Language does not exist in a vacuum, but rather is easily affected by social, cultural, political and economic processes. Yet, as Lippi-Green notes, people are generally reluctant to acknowledge language as a social construct. (Lippi-Green 2011, xx). Instead, they prefer to typologize concepts of identity into neat and corresponding categories. Thus, the media, both expressing this preference itself and also aiming to satisfy society’s preference, reproduces reports about Ukraine that feature the country’s division into bounded ethno-linguistic-national groups whose members share political interests. Yet ultimately, such typology only reproduces flawed ideological views of language (Hill 2008, 2). The image of Ukraine as divided into two ethnic/linguistic/cultural blocs appeared repeatedly in western media sources. In July, the author of an editorial in the *Sydney Morning Herald* wrote:

It is more than 20 years since the orderly, democratic, bloodless dissolution of Czechoslovakia...Like Ukraine, [Czechoslovakia] was a nation divided with geographic neatness between language and ethnicity...Ukraine...is irrevocably broken into two by ethnicity, language, geography and now blood. (Sheehan 2014)

The author plainly describes Ukraine as ‘neatly’ divided geographically by language, as well as ethnicity. He dramatizes this portrayal through the phrase ‘irrevocably broken’ and even characterizes it as violent by qualifying Ukraine as broken ‘by blood.’ By comparing Ukraine to Czechoslovakia, the author emphasizes Ukraine’s divide as deep enough to warrant separatism. His praise of Czechoslovakia’s division into two states with different languages as ‘orderly,’ demonstrates what scholars argue about people preferring their social world to be structured. Suggesting that half of Ukraine should separate, and depicting the country as ‘bloody,’ reproduces important elements of the Kremlin’s storyline, especially its narrative about the ‘Russian-speaking’/ ‘Novorossiya’ portion of Ukraine. The invocation of an ideological understanding of languages as a way of neatly dividing nations, while simultaneously depicting this divide in Ukraine as violent creates a notable and interesting contradiction, revealing the true folly of this language ideology.

Data & graphics

Frequently, western coverage of the conflict in Ukraine cited data derived from problematic sources, or even failed to cite data at all. Related to this trend was the incorporation of simplistic graphical representations of the situation in Ukraine, which were also often based on flawed data. This problematic use of data is significant because it usually served as ‘evidence’ for reports of Ukraine as divided by language. Indeed, coverage often based such reports on the 2001 Ukraine census, which is accepted by language scholars and experts on Ukrainian demographics as generating a flawed representation of Ukraine’s demographic composition and guilty of reinforcing ideological conceptions of identity that support the notion of a divided Ukraine. When the western press treats census data without skepticism, it consequently fails to treat the

narrative of a language divide with skepticism. The *Washington Post*, *BBC News* and *CNN* each fell into this trap. The author of the *Washington Post* article, “9 questions about Ukraine you were too embarrassed to ask,” wrote:

One-third of the country speaks Russian as its native language, and in practice even more use it day-to-day. The Russian-speakers mostly live in one half of the country; the Ukrainian-speakers live in another. You can see that clear-as-day divide in the map. (Fisher 2014).

The map the author mentions is included in the article. It contains the caption, “Ukraine’s language divide” and divides the country into a yellow ‘Ukrainian-speaking’ east and a blue ‘Russian-speaking’ west. The phrase ‘clear-as-day’ demonstrates that the author views this map as legitimizing his claim of a geographical language divide. But dividing Ukraine into two blocs colored according to the language each supposedly speaks inappropriately simplifies the reality, while expressing ideological conceptions of language and identity. Indeed, this portrayal mistakenly assumes that languages can be cleanly demarcated on a map and therefore views languages as bounded and distinct. Among many other realities, the map erases the existence and experience of speakers of Russian in the western half, speakers of Ukrainian in the east, and speakers of both languages and the dialect ‘Surzhyk’ in both halves. Moreover, the data used to generate the map came from the 2001 census question about ‘native language,’ a question flawed from conception due to the varied interpretations of the term ‘native language’ among respondents – in addition to many other unreliable elements of that census’ design and administration.

CNN and *BBC News* both use maps based on the 2001 census to back up statements of a language divide in Ukraine. The *CNN* article lists language as the first of “a couple of ways” in which Ukraine is divided; putting language first frames it as the most significant of these (*CNN* 2014). Then, it presents a color-coded map of Ukraine showing a ‘Ukrainian-language’ west and ‘Russian-language’ east. Once more, the map’s data comes from the misleading 2001 census question about ‘native language.’ Similarly, in addition to a few other graphical representations of the demographic composition of Ukraine, the *BBC News* article includes a map nearly identical to that of *CNN*’s. This map, citing the 2001 census, color codes Ukraine by ‘native language,’ depicting western Ukraine as “less than 20%” native speakers of Russian, central Ukraine as “20-50%,” and eastern Ukraine as “50%+” (*BBC News* 2014). Both articles’ maps not only perpetuate incorporation of the 2001 census as a reliable source of data, but they also uphold a misrepresentative portrayal of Ukraine’s linguistic situation that, in addition to erasing the complexity of language and identity in that country, ultimately reinforces a false narrative of linguistic division. Furthermore, the *BBC News* pie charts, which are also based on the questionable 2001 census, reinforce this narrative. Graphically representing identity categories as neat pieces of a pie erases the complexity of ethnic identification, creating a misleading ideological conception of ethnicity as total and precise. In reality, most people in Ukraine identify as multi-ethnic or may identify differently depending on context.

Why does the media rely on flawed census data to support an equally flawed conception of Ukraine as neatly and geographically divided by language? Perhaps because the census itself is designed in a manner to produce simple and structured notions of identity. Charles Hirschman, studying the institution of the census in its early years, wrote about “the census-makers’ passion

for completeness and un-ambiguity” which dictated “their intolerance of multiple, politically ‘transvestite,’ blurred, or changing identification” (Anderson 1991, 166). As a result of this passion on the one hand, and intolerance on the other, early census-makers conceived of populations as being neatly classifiable. Indeed, Hirschman eloquently commented, “The fiction of the census is that everyone is in it, and that everyone has one — and only one — extremely clear place. No fractions” (Anderson 1991, 166). This ‘fiction’ is visible in the design of the 2001 census and its reproduction in the western media as an instrumental component of reporting on events in Ukraine. The census itself produces the notion of Ukraine as demographically divisible by ethnicity and language. By accepting this census without skepticism, the western media reproduces an ideological view of identity as static and identity relationships as directly corresponding. In this way, it easily reports as fact the myth of a divided Ukraine.

In addition, the western media coverage frequently incorporates data and graphics without citation— an example of ultimate lack of critical engagement with the issues subject to coverage. For example, another *Washington Post* article features a map illustrating a language divide in Ukraine without citing the data used to create the map. Perhaps journalists are less likely to check the source of a map than raw data because there is a ‘common sense’ understanding of maps as a sort of graphical authority. If someone has taken the time to create a map, then the journalist apparently assumes the data it is based on must be true. Without verifying the validity of its data, the article frames the map as evidence of a demographic divide in Ukraine, which it brazenly argues is the absolute cause of the conflict: “This one map helps explain Ukraine’s protests” is the caption accompanying the *Washington Post* map (Fisher 2013). The article’s author argues that the opposing interests of Ukraine’s ‘two’ geographically-based

ethno-linguistic groups, illustrated by the map, is responsible for the country's unrest. Then, presumptions firmly in place, the author compares this opposition to the American political divide between the 'red' and 'blue' 'Americas,' even qualifying the Ukrainian divide as "much deeper" (Fisher 2013). He writes, "imagine if red and blue America literally spoke different languages" (Fisher 2013). In this way, the author replicates the narrative about a language divide in Ukraine using a dramatic analogy seemingly aimed at emphasizing the extent of division in a manner that an American reader would comprehend as common sense.

News coverage from each the *Guardian*, *Time*, *Vox* and the *New York Times* are guilty of citing flawed sources or not sourcing information at all while reproducing the narrative of a Ukrainian language divide. *Vox* published an article in September 2014 titled, "I hear that Ukraine is divided between east and west. Can you explain that?" (Vox 2014). It is notable how this title jumps to a request for an explanation of a 'divide,' without first questioning whether any divide actually exists. Furthermore, the article states:

Since declaring independence in 1991, Ukraine has been divided, and this crisis is an extension of that. When people talk about this divide, they typically refer to language. About two-thirds of Ukrainians speak Ukrainian as their native language, mostly in the country's west; about a third are native Russian-speakers, mostly in the east...You will notice that, in all four [maps], there is a very clear line dividing the country's west from its east. (Vox 2014).

This statement puts forward an entrenched notion of a language divide in Ukraine by presuming that there has been such a divide for decades. Moreover, it reiterates the Kremlin's

narrative of linguistic division as the cause of Ukraine's conflict. The *Vox* article includes a map, citing the *Washington Post* as the map's source, though the *Vox* map is obviously originally based on the faulty 2001 census and is therefore inaccurately cited. The map graphically depicts, and thereby reinforces, a textual description of a linguistic divide in Ukraine, featuring Ukrainian-speaking western and Russian-speaking eastern halves. The author never evaluates the data used to craft this depiction and seems uninterested in investigating the narrative of linguistic division. Similarly, the author of a *Guardian* article includes a simplistic map that splits Ukraine into two colored halves: a blue, Ukrainian-speaking West and a red, Russian-speaking east. The map, which is not cited, is captioned "The Ethno-Linguistic Divide," though the map only discusses language (Walker 2014). This description conflates ethnicity and language, thus propagating an ideological notion of these two identity categories as equivalent. In this way, the *Guardian* replicates the Kremlin's frequent conflation of identity categories.

Time magazine, *Forbes* and the *New York Times* all reference numerical data or include maps that reinforce a divided portrayal of Ukraine without citing their sources. (Mitchell 2014; Shuster 2014; *New York Times* 2014). The *New York Times* map codes Ukraine into a non-striped Ukrainian-speaking west and a striped east, containing "significant Russian-speaking populations." None of these maps address widespread multilingualism or use of Surzhyk in Ukraine, and in none of the articles do the authors evaluate the data or question the simplistic representations. These are only a few prominent examples demonstrating the trend in western media coverage portraying Ukraine's linguistic situation using flawed data and graphics as evidence. Ultimately, these portrayals lack nuance; they do not recognize multi-ethnic or multi-lingual identity.

Graphics are particularly effective in drilling into the reader a simplistic depiction of Ukraine, because, like titles and subtitles, readers frequently interpret graphics without reading the remainder of the corresponding article. In fact, as Catherine Lutz and Jane Collins write in *Reading National Geographic*, journalists and editors often know exactly what their audiences are specifically paying attention to and looking for, as well as what readers prefer to skim or tune out when reading articles (Collins & Lutz 1993). Looking at a map or a pie chart that sums up the demographic situation in Ukraine in such an elementary way allows the reader to easily interpret and absorb that image in their mind. Collins & Lutz cite Barthes, writing that “as [he] pointed out, ‘the photograph is not only perceived, received, it is *read*, connected more or less consciously by the public that consumes it to a traditional stock of signs’ (1977:19; emphasis in original)” (Collins & Lutz 1991, 137). Essentially, Barthes argues that readers of publications generally view photographs as genuine representations of a situation. Furthermore, if the reader does not read further to contextualize the image, they risk internalizing a defective image as common sense. Indeed, according to Collins and Lutz, the manner in which the reader interprets a graphic is “structured by the context of reading” (Collins & Lutz 1991, 138). The difference between “a quick browsing” or taking the time to “read slowly and closely” can determine which ‘version’ of the article becomes fact for that reader — for example, a ‘quick browsing’ might cause them to understand events in Ukraine as the result of a simple language divide, while a closer read might enable them to understand the roots of the conflict with more nuance and detail.

Anderson’s discussion of the discursive power of the census helps explain why graphics are so successful at reinforcing certain narratives of events, especially when used in combination

with census data. In particular, Anderson notes the “crucial intersection between map and census” (Anderson 1991, 174). He argues that the political categories imagined through the census “filled in politically the formal topography of the map” (Anderson 1991, 174). In this way, censuses influenced the development of maps into instruments of the simplistic geographical representation of social groups. By providing a graphical representation of a summarized range of demographic data that already has been simplified and typologized, these maps are further simplified by linking distinct and interested identity categories to geographical territories. As Anderson writes, the “map served firmly to break off the infinite series of [different ethno-linguistic groups] that the formal apparatus of the census conjured up, by delimiting territorially where, for political purposes, they ended” (Anderson 1991, 174). Census data and maps mutually reinforce a reliance on summary and simplification of countries like Ukraine, when those countries in reality exhibit demographic complexity and diversity. Anderson writes that together, the census and map formulate a “political-biographical narrative” of nations that conceives of them as possessing regionally-bounded social groups (Anderson 1991, 174). In the case of Ukraine, this ‘political-biographical narrative’ dictates that the country is inhabited by geographically-tied, homogenous ethno-linguistic groups, and therefore erases the diversity that actually exists. This depiction is significant because it perpetuates an image of Ukraine as divided by language, which in turn supports the Kremlin’s false narrative of both linguistic division and discrimination.

Finally, a media audience’s pre-existing common sense notions about language and identity are factors in how they interpret simplistic graphics featured in western media reporting

on events in Ukraine. Once more, Collins & Lutz' analysis of pictorial representations in *National Geographic* shed light on this phenomenon. Collins & Lutz write,

What *National Geographic* subscribers see is not simply what they each get (the physical object, the photograph), but what they imagine the world is about before the magazine arrives, what imagining the picture provokes, and what they remember afterwards (and transfer to other domains) of the story they make the picture tell or allow it to tell.
(Collins & Lutz 1991, 138)

Essentially, the reader's own ideological understanding of language and identity — perhaps a common sense view of languages as bounded, homogeneous and identity categories as directly corresponding and equal — could lead them to be even more accepting of simplistic representations that align with those ideological understandings. Furthermore, as suggested by Lippi-Green and Hill's arguments, a general preference for basic depictions of the social world is likely to predispose a western audience, possibly reading about Ukraine for the first time or without much background on the country, to readily accept straightforward depictions of rapidly changing and complicated developments there. In turn, perhaps the authorities within the institution of the media would prefer to limit the complexity of their graphics to cater to this audience.

Even coverage that attempts to represent the complexity and nuance of Ukraine's linguistic situation frequently succumbs nevertheless to the reproduction of the Kremlin's version of the situation. For example, the *Atlantic* criticizes other western media outlets for simplifying illustrations of language and identity in Ukraine, and explicitly challenges *Al Jazeera*

for using a map that divides Ukraine in two halves: a “mainly Ukrainian speakers” west and a “mainly Russian speakers” east (Kates 2014). Notwithstanding the *Atlantic*’s useful challenge to this uncritical media reproduction of a simplistic and divisive portrayal of language in Ukraine, it ultimately falls victim to this reproduction by relying on faulty 2001 census data to make that critique. Indeed, the author attempts to problematize simplistic portrayals of Ukraine’s language situation by discussing how Ukraine’s Kharkiv Oblast is mostly Ukrainian-speaking even though it is located in eastern Ukraine, and then further demonstrating that a ‘pocket’ of Russian-speakers also live in the ‘Ukrainian-speaking’ oblast. The *Atlantic* bases both its depiction of Kharkiv Oblast as Ukrainian-speaking as well as its depiction of certain pieces of the oblast as ‘Russian-speaking’ on a few pieces of data from the 2001 census that fall outside of the study’s overall message.

On one hand, the article exposes linguistic diversity and nuance in Ukraine by showing that even within the presumed Russian-speaking east, a region can be predominantly Ukrainian-speaking, and also that a region characterized as Ukrainian-speaking can include Russian-speaking sections. But at the same time, the article uses a source that generally produces a simplistic and flawed view of Ukraine’s linguistic composition. Furthermore, using the 2001 census as a source precludes the *Atlantic* from discussing Surzhyk-speakers and multilingual identification, because the 2001 census does not account for these categories. Therefore, despite challenging one or two assumptions, the *Atlantic* nonetheless ends up relying upon the same dichotomous understanding of Ukraine as comprising only Russian-speakers and Ukrainian-speakers.

But the *Atlantic* was not the only western news source that simultaneously exposed and

succumbed to simplistic and flawed representations of Ukraine's demographic situation. *CBS* news coverage featured a pie chart captioned "Ukraine's Ethnic Groups," which neatly divides Ukraine into six portions, five labeled ethnic groups and "other" (Kaplan 2014). This chart, presented next to a map of Ukraine indicating where 'native speakers' of each language live, is based on the 2001 census. Text introducing the pie chart states, "[Ukraine] is divided by ethnic heritage, language and politics" qualifying it as "division at the heart of the protests" (Kaplan 2014). Such language clearly reproduces a Kremlin portrayal of the 2014 conflict as rooted in an entrenched divide in Ukrainian society. The author does not challenge that portrayal, yet she does attempt to expose the complexity of identity in Ukraine to some extent. For example, she writes, "ethnic heritage is not black and white: ethnic Russians intermarried with ethnic Ukrainians, but also with...other groups represented in the country" (Kaplan 2014).

Furthermore, the author challenges another aspect of the Kremlin narrative: Russian-speakers in Ukraine are more strongly affiliated with Russia than Ukraine. Kaplan actually quotes a few expert sources in order to argue that "it would be a mistake to conflate Russian language with a desire to be a part of Russia" (Kaplan 2014). Yet, amidst this more nuanced approach to the linguistic situation, the article still includes a large, brightly colored graphic that represents Ukraine as neatly divisible by ethnicity and does not account for the ethnic variation described in the text. Furthermore, Kaplan makes claims about which proportion of the population speaks Ukrainian, using 2001 census data and framing it as representative of the current situation. Unfortunately, she does not evaluate the 2001 census as a source. Therefore, the article's evaluation of totalizing statements about linguistic and ethnic identity in Ukraine still falls short, thereby demonstrating the strength of ideological notions of these categories.

Conflating ethnic & linguistic identity

The western media frequently conflates language and ethnicity – a conflation that erases multilingualism and other complex processes of identification. Anderson's discussion of the co-emergence of nationalism and modern language ideologies provides insight into why society tends to conflate identity categories in general. This tendency frequently includes linking language to ethnicity, a trend certainly visible in western media reproductions of the Kremlin's storyline. Anderson notes the history of philology, arguing that the science was "central to the development of standard language ideology, because it introduced the study of grammar, the practice of classifying language families and the 'scientific comparative study' of languages" (Anderson 1991, 44). As scientific and structured conceptions of language came to dominate societal understandings of language, Anderson writes, "the notion that bounded languages belonged to bounded social groups expanded, eventually developing into a linguistic ideology that asserts that language groups are homogenous...inherently tied to nationalism, and that ethnic and linguistic identity have a direct relationship" (Anderson 1991, 44). As mentioned earlier, language ideologies developed as such due to a natural desire to impose order on the social world. The construction of bounded identity groups is one product of this desire in how it demarcates the social world into easily interpretable categories. Kroskrity writes that, "Language ideologies are productively used in the creation and representation of various social and cultural identities (e.g. nationality, ethnicity)" and that "language, especially shared language, has long served as the key to naturalizing the boundaries of social groups" (Kroskrity 2007, 509).

In reporting about the linguistic and ethnic situation in Ukraine, the western media repeatedly presumes that linguistic and ethnic identity can be inferred from one another. For

example, the *International Business Times* contextualized the supposed language divide in Ukraine in the following manner: “Russian and Ukrainian are closely related Slavic tongues, but they are also distinct languages with separate ethnic and national identities” (Ghosh 2014). Constructing the sentence in this manner suggests that speakers of Russian and speakers of Ukrainian must also identify ethnically with their language. Such phrasing ignores the reality that most Ukrainian citizens speak both languages and/or Surzhyk, and that language use and identification is frequently context-dependent. Similarly, a *Forbes* article explicitly presumes that Ukrainians’ ethnicity may be inferred from the language they speak. Indeed, the author writes, “...look at this linguistic map of Ukraine. The red parts of the country show where Russian is the primary language and where most people presumably are ethnically Russian” (Mitchell 2014).

The author, Mitchell, even uses the word ‘presumably’ to describe his conclusion that the people in the Russian language ‘parts’ of Ukraine are ethnically Russian. Mitchell at least recognizes that he has made an assumption, but does not recognize his own failure to examine it. Both this and the *International Business Times* article essentially express an ideological conception of identity linking ethnicity and language. Furthermore, it is important to point out that the *Forbes* article once more emphasizes an image of Ukraine as divided by language (and ‘presumably’ ethnicity) by graphically representing it that way on a map that simplistically partitions the country into differently colored halves.

Sydney Morning Herald columnist Paul Sheehan also implied the existence of a direct relationship between ethnicity and language by stating at different points in the column that Ukraine is “broken into two by ethnicity [and] language” and “divided with geographic neatness between language and ethnicity” (Sheehan 2014). Because he always describes the two identity

categories hand in hand, even using the conjunction ‘and,’ Sheehan discursively represents them as inevitably linked, which in turn perpetuates an ideological view of them as such. The use of the word ‘broken’ dramatizes the portrayal of the language divide, while ‘neat’ further erases the actually very complicated reality of language and ethnicity in Ukraine. While similarly erasing Ukraine’s demographic complexity, a map used frequently by the *Guardian* also demonstrates a conflation of language and ethnicity. The map separates Ukraine into three sections, each shaded to correspond to one of the following categories: “Majority Ukrainian-speaking,” “Majority Russian-speaking” and “Other ethnic minorities” (Walker 2014). Essentially, the map attempts to treat categories of language and ethnicity as equal cogs in a system, thereby implying that they are equivalent and interchangeable — a flawed notion of identity. Indeed, literature about the steadfastness of essentialist conceptions of language and ethnicity in both scholarship and journalism indicates that society has internalized a view of the two identity categories as corresponding, which in turn helps explain why such a view is frequently reproduced by the media without deeper analysis. Mary Bucholtz and Kira Hall write that cultural essentialism, which “relies on language as a central component” and is central to the “forging of a close ideological connection between language and identity, especially ethnic identity” forms the foundation of the social sciences (Bucholtz & Hall 2007, 374). The ability of essentializing views to cement themselves in societal conceptions of identity seems to be primarily responsible for society’s internalization of language and ethnicity as inherently linked in a common sense manner. Indeed, Bucholtz and Hall denote the “process of essentialization” as the “creation of a naturalized link between the linguistic and the social that comes to be viewed as even more inevitable than the associations generated through indexicality” (Bucholtz & Hall 2007, 380).

Furthermore, “actual practice may be far removed from the imagined practices that ideology constructs on the basis of perceived and literalized metaphorical resemblance between language and social organization” (Bucholtz & Hall 2007, 380). Basically, even when the actual and visible practice of a social group visibly demonstrates that language and ethnicity — or other identity categories — are not directly related, this reality will be erased and replaced with an essentialist presentation, probably because essentialist conceptions are easier to comprehend. And, as Hill and Lippi-Green show, people simply prefer digestible representations of the social world. The *Guardian* article participates in the conflation of language and ethnicity, yet even more striking is its incorporation of another ideological view of language groups as being homogenous in terms of political interests. Indeed, the article is titled, “Ukraine: tale of two nations for country locked in struggle over whether to face east or west” (Walker 2014), which first characterizes Ukraine as divided, and shapes this divide as ideological. The combination of a map representing a neat language divide in Ukraine with text claiming that the country is also ideologically divided suggests that the presumptive language halves are also politically opposed. Such a notion articulates an ideological conception of language groups as politically homogenous — another notion frequently produced by the Kremlin to depict Russian-speakers in Ukraine as feeling a collective attachment for Russia.

Indeed, another major theme in the western media’s reporting on Ukraine is how it perpetuates this notion of Ukrainian Russian-speakers as a homogenous community with a strong affiliation for Russia, a notion that then implicitly legitimizes the idea that Russia is responsible for their well-being. Generally speaking, this reproduction implies an ideological view of language groups as bounded, and more significantly, views members of bounded language

groups as politically and culturally the same. Kathryn Woolard and Bambi Schieffelin write that language ideologies “enact links of language to group and personal identity” (Woolard & Schieffelin 1994, 54). While it is true that many social groups define themselves at least partly in terms of shared language, the linguistic ideology in play goes further to presume total homogeneity of a language group. But language ideology often presumes homogeneity of a social group in regard to language.

The historical reliance of nationalism and nation-building on linguistic sameness is probably most responsible for the emergence of this language ideology. Indeed, Woolard and Schieffelin write that since nations began forming a few centuries ago, a “nationalist ideology of language [has] structure[d] state politics, challenge[d] multilingual states, and underpin[ned] ethnic struggles to such an extent that the absence of a distinct language can cast doubt on the legitimacy of claims to nationhood” (Woolard & Schieffelin 1994, 60). One of the key elements of language ideology is the belief that “an idealized nation-state has one perfect, homogenous language” (Lippi-Green 2012, 68). In fact, it seems that a societal acceptance of the notion of nations as each possessing one pure and standard language is at least partly responsible for the media’s easy reproduction of narratives about Ukraine incorporating this notion. If a national understanding of language is common sense, then perhaps journalists do not even consider questioning narratives about Ukraine that characterize speaking Russian as naturally inclining a person toward Russia. But beyond being a flawed interpretation of Ukraine’s reality, the intertwining assumptions of the single shared language and the inclination of Russian-speakers toward Russia have dangerous implications when repeated in the press. At its most extreme, it suggests that Russian intervention on behalf of ‘their people’ in Ukraine would be rational and

perhaps sought by those people themselves. Furthermore, it potentially legitimizes the secession of the ‘Russian-speaking’ half of Ukraine as a viable solution to the supposed linguistic-ethnic-ideological divide in Ukraine, which is repeatedly framed as the source of conflict. Both suggestions align dangerously with the goals of the Kremlin’s original storyline.

Seemingly unaware of how it is ultimately replicating the Kremlin storyline, the western media frequently conflated Russian-speaking-ness with political and ideological preference for Russia in reporting about Ukraine. The most striking examples appear in *Forbes* and the *Washington Post*. In one *Washington Post* article, the author somewhat outrageously analogizes the two Russian and Ukrainian language groups to the two major political parties in the United States, even characterizing the former’s antagonism as greater than the latter’s:

Ukraine’s ethno-linguistic political division is sort of like the United States’ ‘red America’ and ‘blue America’ divide, but in many ways much deeper – imagine if red and blue America literally spoke different languages. The current political conflict, which at its most basic level is over whether the country will lean toward Europe or toward Russia, is like the Ukrainian equivalent of gun control, abortion and same-sex marriage all rolled into one. (Fisher 2013)

In strongly reproducing the notion of a divisive linguistic situation in Ukraine, Fisher is afloat on a sea of false assumptions. He expresses an ideological view of language and ethnicity as linked, by describing the ‘sides’ as ‘ethno-linguistic’ groups. Already, this is an exciting and provocative way of illustrating the situation. He then qualifies their division as ‘political,’ emphasizing this qualification by analogizing it to that which occurs in the US regarding hot-

button issues, thereby presuming that the groups' political affiliation corresponds to their ethno-linguistic status.² Imagining the diverse population of Ukraine as categorizable into two groups that are homogenous in terms of language, ethnicity and political persuasion, the author perpetuates the Kremlin's imagining of a homogenous 'Russian-speaking' community in Ukraine.

A *Forbes* opinion article also uses false analogy to perpetuate the myth of a linguistically divided Ukraine. In this article, Mitchell compares Ukraine to countries that have split up due to linguistic differences, which the author frames as naturally indicative of cultural and political differences. One case he references is that of Czechoslovakia, which divided into the separate nations of Slovakia and Czech Republic in 1993. Despite the reality that this dissolution had many other causes, the author explicitly argues that it occurred so that the two major linguo-cultural groups in Czechoslovakia could each live in states representative of their supposedly distinct interests. Mitchell similarly believes that "Belgium should be split into two nations because of linguistic and cultural differences" (Mitchell 2014). After discussing how language differences necessitated division for Czechoslovakia, and advising similar division for Belgium, he declares that Ukraine must also "divorce" (Mitchell 2014). Alternatively, he suggests that Ukraine could replicate the "Swiss model of radical decentralization," wherein each language group in the state has its own regional government (Mitchell 2014).

Mitchell's discussion and presentation of solutions to the 'problem' of multilingualism in these three countries demonstrates a few language ideologies. First of all, analogizing Ukraine to Switzerland misunderstands the different forms that multilingualism can take in a country. In

² Ironically, the corresponding notion that red states should be able to secede from the United States over their differences on these issues does not occur to the author.

Switzerland, language groups are indeed more distinct and mostly correspond to specific regions of the country, as a result of Switzerland's history and the role of mountains in forming physical boundaries between language groups. Conversely, multilingualism in Ukraine is widespread and fails to neatly correspond to geographic regions. But by assuming that the Swiss Model would work in Ukraine, the author presumes that language groups there must be similarly distinct and geographically located. At the same time, he also assumes that these language groups are homogenous in terms of political persuasion. Indeed, the author argues that speakers of Russian and speakers of Ukrainian must live in unique states due to naturally opposing ideologies. In reality, Ukrainians' linguistic practice and/or identity do not necessarily correspond to their political beliefs and/or identities. An ideological view of language groups as standard, distinct and homogenous cannot account for this reality. And, unfortunately, the ideological view is also the common sense view of language, precluding critical reflection when making flawed analogies like the ones present in this article.

Susan Gal and Judith Irvine sought to examine why and to what extent people remain committed to a perception of nations as monolingual or containing regionally-bounded language groups. In the 1800s, three languages were regularly spoken in Senegal, yet these languages were not regionally-located. European institutions were frustrated by the lack of bounded, territorially-based social groups in the country. Thus, when they documented the Senegalese languages, "linguistic features and varieties that could not be made to fit such a model were erased from the picture" (Gal & Irvine 1995, 989). As a result, "differences between [languages] were highlighted; variation and overlap were erased" (Gal & Irvine 1995, 980) and any "mixed" identities were ignored (Gal & Irvine 1995, 989). The Europeans' goals, it seems, was to satisfy a

desire for language to function in the way they were used to at home, thereby demonstrating Hill and Lippi-Green's arguments that people seek easily digestible and 'comfortable' representations of language, in addition to representations of any type of identity category or social process. Perhaps this same desire is responsible for the *Forbes*' author's lack of acknowledgement of the uniqueness of Ukraine's complex language situation and attempt to interpret it through the lens of inapposite comparisons. Indeed, like the European powers in the Senegalese case, both the *Forbes* and *Washington Post* authors tried to describe Ukraine's linguistic situation in terms that they understood, even if their cases were actually inappropriate analogies.

Conclusion

In analyzing numerous western media articles about the conflict in Ukraine, I noticed little engagement with linguistic aspects of the conflict. Why did these articles present language and other identity concepts in such a simplistic and uncritical manner? Perhaps the answer is provided by scholars writing about language ideologies, particularly how such ideologies become internalized as common sense for a variety of reasons – including a general reluctance to challenge them. Indeed, scholars write that language ideologies impose structure and order on social processes that are, in reality, complex and evolving. Because a structured view of the social world allows people to comprehend it in a more digestible and 'comfortable' way, they are quick to internalize and reproduce ideological conceptions of language. In fact, Lippi-Green argues that people will cling to this structure, even becoming "strongly protective of common sense arguments about language which have no demonstrable basis in fact" (Lippi-Green 2011, xx). If Lippi-Green's argument is correct, then it is not surprising that a simplifying narrative of

Ukraine's language situation, which ultimately incorporates and preserves many commonsense notions about language, is easily reproduced by the western media. Perhaps western journalists do not question claims about language simply because it disturbs their world view, or alternatively, because they want to appeal to an audience that desires an orderly representation of language.

In turn, ideological conceptions of language, reproduced in the media, eventually transform into discourses that reinforce and perpetuate their reproduction. In fact, like language ideologies, discourses about any topic under the sun are subject to reproduction and internalization by people and institutions as common sense, because they, too, impose structure on the social world. Indeed, according to Hill, discourses “divide rationality from irrationality, truth from error, madness from sanity” and are themselves capable of creating new discourses (Hill 2009, 19). Then, “each time this common sense plays out in talk and behavior, these fundamental ideas become available anew, and people use them to understand” new and changing events (Hill 2008, 19).

It is understandable that people are comfortably complicit in reproducing language ideologies and discourses founded upon them. But more troubling is the power generated by such reproduction generates. Indeed, the ease with which language ideologies are internalized enables agents of authority to deploy language ideologies to serve their own interests and sustain their power. Indeed, notable theorist Pierre Bourdieu writes that power comes from the ability to “impose the legitimate definition of the divisions of the social world,” like linguistic divisions (Bourdieu 1991, 221). For this reason, it is important to recognize the easy manner in which the western media swallowed and regurgitated a narrative of events in Ukraine that simplified,

conflated and erased aspects of language and identity among the population of Ukraine. This narrative also happened to align with that propagated by Kremlin officials to present a divisive picture of Ukrainian language politics. The Kremlin is certainly an interested institutional player in the Ukrainian conflict, and its narrative of events is part of a storyline aimed at justifying and implementing a certain policy agenda. When the western media replicated this narrative, the Kremlin's battle was more than half-won, because it perpetuated the Kremlin's 'definition of the divisions of the social world' in Ukraine.

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Goodbye, My Ex-Husband

Nathaniel Costin, University of Michigan

Death is messy, even in the best of circumstances. When death and dying occur in a hospital, the process can be particularly complicated. A familiar scenario might unfold as follows: a patient considers himself a fighter, and he wants to continue living at any cost, but his family and medical providers disagree on how to proceed. While his daughter insists that her father continue chemotherapy, his wife believes that the treatment is only making her husband sicker.

Meanwhile, the physician has become so attached to her patient that she cannot accept that there is nothing more to do for him, and none of her medical interventions have slowed the disease. As those around him bicker, the patient's condition worsens. It is precisely in these situations, in which familial love, biomedicine and hospital bureaucracies commingle, that palliative care is consulted.

Although the practice of palliative care is not new, it has only recently been recognized as a dedicated medical subspecialty. As such, the parameters of what constitutes palliative care are still being defined, both by medical practitioners and by social scientists, including anthropologists. My thesis in its entirety explored one manifestation of palliative care, as an inpatient service at a tertiary teaching hospital. Chapters not included in this publication include *Prove It All Night*, which explores the integration of the palliative care team into the institution itself, and *Some Small, Good Things*, which discusses how the palliative care team protects and nurtures itself, allowing it to overcome the inherent difficulties in caring for the dying and their kin.

The excerpt being shared here, a chapter entitled *Goodbye, My Ex-Husband*, presents a narrative of a representative case. It follows the palliative care team members as they treat a single patient throughout his hospitalization and until his ultimate death. I emphasize how the team members interact with each other and with the patient and the complex family dynamics produced by the patient's condition. I situate these relationships and practices occur within the specific architecture of the hospital and its rooms, in order to show how the built environment affects the experiences of patients, family members, and medical workers during the palliative care process.

This chapter will view the palliative care team at a Midwestern teaching hospital³ (Watson 2012) as it follows a single patient. This patient's story is told from the moment that he is asked to attend a consultation, until he is discharged for the final time. What is to follow is what Geertz would consider “thick description” (Geertz 1994). This chapter will have many details, some of which are out of the scope of this thesis or out of the interest of this researcher. However, it is still important to include them; my aim is to offer more than a “safe and closely chaperoned form of anthropological tourism” (Bate 1997, 1150). The aim in this chapter is to demonstrate a “cultural whole” and to set the more specific analysis in the later chapters within this “cultural whole” of the palliative care team’s everyday job and within the rest of the hospital (Baszanger and Dodier 2004, 13).

Most of the data were gathered through peripheric participant observation. Like Simard in his study of Quebec stand-alone palliative care centers, I held informal conversations in the “crack of activity, participating very distantly in the daily tasks” (Simard 2013). While some

³ The name of the institution has been excluded to protect the providers working there.

semi-structured interviews were conducted with the medical professionals, most of the data are observational, with some documentation (pamphlets, PowerPoint, etc.) complementing. Due to the nature of different locations of my fieldwork, however, I had less freedom to wander around the institution than did Simard. Therefore, like Kaufman in her exploration of dying in hospitals, I had to follow around specific medical teams (in my case the two palliative care service teams) as they traversed the hospital (Kaufman 2005). With these teams, I entered a number of different spaces: the patient room, the conference room on the hospital floors, the palliative care offices, even places outside the hospital. Like others using participant observation to study palliative care, I viewed participants in relation to patients, their families, and other healthcare professionals (Hughes 2009). Using an ethnographic methodology allowed me to observe relationships, and in the process understand the palliative care members' place in the world (Hawthorne and Yukovich 1995). In my research, I focused on initial discussions regarding death and dying, and then observed the evolution of decisions being made. This is best done by looking at specific cases.

The semi-fictional ethnographic vignette is used here for pragmatic reasons; it allows me to share data that would be too sensitive to write otherwise without heavy disguising and redacting. I am discussing vulnerable individuals, so it is an ethical responsibility to protect them (Humphreys and Watson 2009). In cases where anonymity is difficult to maintain due to small sample size and distinct aspects of each individual, semi-fictional accounts are appropriate (Ellen and Firth 1984). Additionally, ethnographers do not “discover” meaning; instead these meanings are interpretations created and conveyed to the reader over a long time in the field (Emerson et al. 1995). Even though the patient, his wife and his diagnosis are composites, these

interpretive constructions, and semi-fictionalized ethnographies in general, can be “characterized as ‘true’” (Humphreys and Watson 2009, 51).

February 9th, 8:00 a.m.

My day starts when I leave my apartment and start walking towards the hospital. My short commute usually takes me through snowy sidewalks. The hospital where I did my fieldwork is a system. The main campus is composed of many different buildings connected by insulated bridges and central courtyards. This does not even include the various outpatient buildings located throughout the surrounding towns. I head towards one of the staff entrances, and use my name badge that doubles as an electronic key to enter. There is a lot of motion, even early in the morning. Orderlies pushing equipment down the hall. Mennonite volunteers walking in pairs. People in scrubs and suits alike walking with a purpose; their day has already started. I walk down the short hallway and then ride up the elevator to the seventh floor; I am heading to the Adult Palliative Medicine offices. Right, right, left out of the elevator, through a large automatic door, down a short ramp, and then into what feels more like an office building than a hospital. It is 8:30 when I walk into the office wing that the palliative care service shares with other services.

Down the hall, there is a large room. This room is shared by the social workers and the chaplain. It is also the unofficial room where nurses and physicians often congregate. The room has a continuous desk against three of the four walls, with five computers on the desk, as well as another nook that does not contain a computer. On two of the three sides, cabinets hang above the desk, while the other side is windows. The fourth wall in the room holds a white board as

well as a pushpin board in the corner. In addition to the different teams for the week, and specific schedules, the boards also contain printed comic strips and amusing patient quotes. My personal favorites are: “But he’s not just a brain. What about everything else that’s wrong?” and “Amazing care in a futile kind of way”. It is here where I spend most of my time around the office.

Although every day is different, there is a certain pattern that emerges. Before 9 or 10 a.m., team members are at their computers; the social workers and chaplain in the large room, the two nurse practitioners in the small, cramped room next door, and the physicians in either the room next to that or the one next to the kitchen on the other side of the office. In addition to getting acclimated to the day and drinking coffee, everyone is reviewing the electronic medical records, learning about the patients who will be seen during the day.

We will be tracing the course of one patient, Terrence Fredrickson⁴, a 63-year-old man, who was added to the list as a new consult earlier this morning. I join Hilary McIntyre, the social work masters student, as we learn about Mr. Fredrickson. The consult order only tells us that palliative care has been called for Goals of Care/Advanced Care Planning. Sometimes, when a consult is requested, there may be a sentence or two of clarification, but not this time.

Our next step, therefore, is to review the electronic medical records. He was admitted to the hospital four days ago with an acute gastrointestinal (GI) bleed, but he also has hepatitis C, cirrhosis, esophageal varices (enlarged veins in the lower part of the esophagus that are prone to bleeding and rupture), and alcoholism, as well as ascites (fluid buildup in the space between the lining of the abdomen and the abdominal organs). Next, we look at the social worker note to

⁴ All of the names throughout are pseudonyms to protect their identities.

glean information about his family and social support system. Mr. Fredrickson has an estranged daughter as well as a divorced wife whom he trusts. Although Mr. Fredrickson does not currently have a Durable Power of Attorney for Healthcare (DPOA-HC) designating who can make medical decisions for him if he becomes unresponsive, he would like his divorced wife to fulfill this role. This strikes me as odd; if they are so close, then why did they divorce in the first place? But, relationships are complicated. Hilary and I next look at the hospital case manager note to establish his insurance (or lack thereof) and living conditions. Our patient lives alone. Finally, we review the consultants' notes to determine who else is involved with Mr. Fredrickson's care. We learn that he lives about three hours away. Hilary calls this part of the morning "detective work". This patient has not previously been part of the hospital system so his medical record is confined to this hospitalization. Some of the information is a bit repetitive, but that is ok. Our goal here is to round out the picture of the patient.

February 9th, 9:45 a.m.

Before the teams divide and review patients, everyone gathers in the large office for a daily ritual of thought, which has been named Word of the Day and will be described more fully below. Some are in seats, others are leaning against the walls or sitting on the wraparound desk as we read and discuss a meditative poem entitled At Least by Raymond Carver that compels us to appreciate each and every day, to "get up early one more morning, before sunrise." Once this is finished, the two different teams head to separate areas to review the patients. Today, I join Noah Sawyer, a doctor in his mid-thirties whose background is in pediatrics, Phoebe Sovall, a middle-aged nurse practitioner, and Minnie Beyer, a middle-aged social worker. We walk down

the hall and around the corner to the naturally-lit conference room. Since this room is in the corner of the building, large windows around the exterior walls let in rays from the sun. Around a table that could belong in any kitchen, the four of us review the patients and discuss how we plan to address the day. Each of us has a patient list printed that includes general information about the patients printed out in front of us. These usually contain between four and eight names, but today they include six. Mine includes the patient's name, age, current location in the hospital, and primary problem, but the different practitioners can personalize what the list includes. Other options include religion, primary team, attending, first contact, nurse, and code status, as well as admission day. Noah and Phoebe also have printed out the sign-off reviews of old patients by the physician on call during the weekend.

Today, in addition to the diagnosis given for Mr. Fredrickson, the other patients' primary problems include pneumonia, acute on chronic respiratory failure, metastatic cancer to bone, acute on chronic systolic congestive heart failure, and uncontrolled pain. Mr. Fredrickson's primary problem is listed as acute GI bleed; when his case is discussed, however, Noah remarks that this primary diagnosis is less helpful than mention of his alcoholism and hep C, which had resulted in the cirrhosis and esophageal varices that led to the bleed. For the other patients, it is similar; we parse out the underlying conditions that drive the patients' illnesses.

This morning, Minnie called back the resident who ordered the consult on Mr. Fredrickson and learned that the ex-wife had told the resident to leave when hospice was even mentioned. Mr. Fredrickson had also agreed with her. Therefore, in our meeting in the office, the team discusses the need to start what they call a backdoor relationship with them. Although they have never met Mr. Fredrickson, it is not uncommon for them to work with patients who

have not yet accepted that they are dying. These patients are often discharged and return to the hospital shortly thereafter. It is during this repeat hospitalization that patients and their families begin to understand the gravity of their situations. However, even though Noah, Phoebe, and Minnie know that this patient will soon be discharged and return to the hospital, they can still manage Mr. Fredrickson's symptoms, in the process gaining his and his ex-wife's trust. Then, when he inevitably returns, palliative care will be a recognizable and loyal face. At that point, they can discuss goals of care. The team decides to see him after lunch, at a quieter time, and have only the physician and the nurse practitioner speak with Mr. Fredrickson and his former wife. I will also be in the room observing.

February 9th, 1:45 p.m.

After lunch, the three of us go to the sixth floor of a different building to introduce ourselves to Mr. and ex-Mrs. Fredrickson. To get there, we must ride the elevator down to the second floor, walk through the halls that weave through this building, then across a covered, insulated bridge that connects to the primary building of the hospital, around the corner from the bridge to an elevator that takes us up to the sixth floor. This commute leaves plenty of time to discuss mundane topics such as new movies and terrible snow storms as we share the elevators with all manner of people such as nurses, patients' families, orderlies and students. Even though we have to traverse different buildings, the buildings are all connected, so we do not have to brave the harsh Midwestern winter. That Noah's pregnant wife is due within the month is often mentioned, and the irony of allowing life to enter this world at the same time as allowing life to exit this world is noted.

When we arrive at Mr. Fredrickson's room, we sanitize our hands using one of the Purell dispensers found outside every room. Mr. Fredrickson is sitting in his bed; his mechanical hospital bed is tilted up so that he can hold conversations easily without having to lean on his side to look at people. He is talking with his ex-wife sitting next to him, and she is holding his hand. This woman certainly seems to be caring for this man in his time of need. There is a pillow placed behind Mr. Fredrickson's lower back, and a cannula threads behind his ears and up his nostrils to constantly provide him oxygen. His green hospital gown is partially open near his left shoulder so that electrical leads can be placed on his chest. These are connected to a machine that shows his electrocardiogram (ECG) on a small monitor placed above and to the right of his head. His hand rests on a thin sheet and blanket, a pulse oximeter clipped to his finger, displaying his pulse rate and oxygen level on the monitor. Above the monitor, there is a clear IV bag connected to a small, flexible tube that winds down and is inserted in the vein of his arm on the inside of his right elbow.

Dr. Sawyer does most of the talking, but explains to the patient and his wife that he will be off service next week, so he brought Phoebe, the nurse practitioner, to be a recognizable face. I am introduced as a student. Dr. Sawyer begins by explaining that palliative care is about giving patients relief from their symptoms, pain, and stresses of their illnesses. Then he asks the patient what he understands about his own illness. Mr. Fredrickson seems to understand that he has had an internal bleed due to his liver disease, but it is unclear if he grasps the gravity of his overall situation. Next, Dr. Sawyer asks about pain. Mr. Fredrickson feels bloated and his abdomen hurts. He knows that there is fluid there because it had been removed at another hospital three times in the last two months. He cannot remember exactly what it is called, so Dr.

Sawyer helps him; the procedure is called a paracentesis. In the middle of this conversation, a nurse enters the room to reattach an ECG lead on Mr. Fredrickson's chest; apparently it had become disconnected when Mr. Fredrickson moved to get into a more comfortable position.

Once the commotion is over, Dr. Sawyer asks if there is any alleviation after the paracentesis. Mr. Fredrickson says that there is, adding that he can also breathe better when his abdomen is not so big. The doctor explains that his breathing is better once the liquid in his abdomen is removed because it is not interfering with the expansion of his lungs. Perhaps a catheter can be inserted into his abdomen permanently so that he or his family can drain the liquid anytime there is discomfort, even at home. Dr. Sawyer says that of course the nurses can teach him and his former wife how to properly drain the abdominal fluid and care for the catheter. The doctor suggests that trying this should remove any discomfort, but adds that should the pain persist or worsen, there are medications that can be tried. While Dr. Sawyer is speaking, Phoebe writes the term "palliative care" on the white board across from the patient's bed. When he has finished and asked if there are any questions or anything that needs to be clarified, the patient's wife thanks us, calling us the FGT, the Feel Good Team. She tells us that when the nurse mentioned that someone from palliative care would be speaking to them, she and her husband did not really know what that meant, so they were a little hesitant. The patient agrees, adding that he was very happy that the hospital has this service. Mission accomplished. A good relationship has been established. Dr. Sawyer hands out business cards for the palliative care service. Before Dr. Sawyer and Phoebe exit, they go up to their patient, one at a time, place their hands on his shoulders, and say goodbye.

Noah, Phoebe, and I walk down the hall to the team conference room, where the floor physicians stay when they aren't actively seeing patients, to discuss Mr. Fredrickson's care. This room has computers around the edges and a central table. Whiteboards with tables of who is taking care of whom and patient diagnoses are on the wall. When we enter the room, there are a number of young physicians, all wearing either scrubs or nice clothes, with white lab coats, on the phones or looking at the electronic charts or grabbing lunch when they have a moment of peace. We find the resident following Mr. Fredrickson and tell him about the paracentesis. Noah explains that he did not speak about goals of care at this time; since Mr. Fredrickson will soon be back, the importance of this meeting, in addition to managing symptoms, was to establish a relationship with the patient and his ex-wife. Noah then asks when the patient can resume even a liquid diet, and the resident responds that, since the bleed seems to have stabilized as of this morning, the liquid diet can resume the next morning. Noah nods in agreement. Before leaving the conference room, Noah says that the palliative care team will continue to see Mr. Fredrickson on a regular basis until he is discharged. The resident replies the patient will likely be discharged within a few days, barring any complications.

March 13th, 2:45 p.m.

When Mr. Fredrickson returns to the hospital about a month later, both he and his former wife are much more receptive to having a conversation about goals of care and hospice. They have brought it up themselves with the residents on the floor. Now, since Dr. Sawyer is no longer rounding with the service, Phoebe is the only one to speak with Mr. Fredrickson and his caring ex-wife. I go as well. Minnie, Hilary, and the new physician on the service for this week round

on other patients, since it is a busy day, and this will be a long consult. Phoebe and I walk to the sixth floor; Mr. Fredrickson's new room is down the hall from where it was before. When Phoebe and I walk in to Mr. Fredrickson's room, the lights are off and the ex-Mrs. Fredrickson is sitting in the seat next to her ex-husband's bed. Phoebe and I pull up chairs; we will be here for a while, and we want everyone to be as comfortable as possible. We know from reading the chart that the patient was doing the paracentesis on his own, that he had not had any more bleeding episodes, but he had become increasingly confused and weak. Phoebe starts the discussion by asking Mr. Fredrickson to explain his understanding of what is happening in his own body. We have to strain to hear his answer, so his ex-wife starts to tell us what the doctors have told them. This becomes a theme throughout the conversation; Mr. Fredrickson is tired and goes between being more and less involved in the conversation, so Phoebe sometimes directs the questions and explanations towards his ex-wife. Her ex-husband has end-stage liver disease with hepatic encephalopathy; his liver is no longer able to remove the toxins, which is affecting his brain. The usual medications are no longer working. His liver has failed.

In a poetic way of establishing goals of care, Phoebe asks Mr. Fredrickson about his hopes followed by his fears. He wants to ultimately go back to his own new apartment, but he would not be averse to going to a step-down facility in the interim, just until he is strong enough to go to his own apartment. He defiantly says that death is his fear. Since Phoebe and I know that his physicians on the floor have mentioned that curative care is futile, and have mentioned what that implies, Phoebe uses the word "death" repeatedly, although gently, throughout the conversation. After about an hour, the patient wants to use the restroom, so we step outside for a moment to give him some time. I ask Phoebe if he would be able to leave a facility and

ultimately go home, or if he would stay at whatever facility he is discharged to. Phoebe explains that although it is possible for a person to go to a facility and eventually home, in Mr. Fredrickson's case it is unlikely.

When we reenter the room, Mr. Fredrickson asks me where I am in my training and what I want to do in my career. I explain that I am an undergraduate, and will be graduating in a few months. I am intentionally vague in explanations, only saying that I plan on entering medicine. He says that I could not have asked for better people than the palliative care team members to train under. Here we are, supposedly there to help this dying man, and he is more interested in learning about a young man who had not yet said a word in his presence and complimenting his providers.

The conversation returns on topic, and continues for another half hour. This conversation has mostly been Phoebe talking, and sharing a lot of new information. Mr. Fredrickson and his wife have no questions to ask at this time; they need time to reflect and absorb what has been shared with them. Before we leave, Phoebe and I go up to Mr. Fredrickson and touch him goodbye. His former wife follows us out into the hall to thank us and hug us.

March 16th, 11:45 a.m.

When I come back a few days later, Mr. Fredrickson is supposed to be discharged to a hospice center near his home across the state the next day. In the intervening time period, Mr. Fredrickson has realized that he is probably not going to be able to return home, and has

accepted this fact. He thanks us, and the team signs him out of the palliative care service. This is the last time anyone from palliative care hears from him.

About a week later, the hospice center that accepted Mr. Fredrickson emails Minnie to notify the palliative care team of Mr. Fredrickson's death. Minnie writes a handwritten note, on personalized stationery on behalf of the entire palliative care team, to the former Mrs. Fredrickson acknowledging her loss.

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St. Louis Delivers: Women's Perspectives on Hospital Birth

Apoorva Ram, Washington University in St. Louis

The Ideal Birth Method

How women imagine an "ideal" birthing process is historically contingent, and does not always reflect how women actually deliver—due to both complications during delivery or sociopolitical influences on birth. In the 1950s, for example, the Lamaze method, defined as a "natural" delivery without anesthesia, was popular conceived of as the ideal birth method. However, the continued use of painful interventions, such as episiotomies and forcep deliveries, in addition to the pain of childbirth, made hospital delivery without anesthesia excruciating. Some women experienced serious complications during delivery that compelled them to have cesarean sections, regardless of their preference for "natural" birth. In America today, visions of what constitutes the "ideal" birth method are influenced by a constellation of factors, including biomedical advances and concomitant desires for a "natural" delivery, as well as class, race and religious differences. In this paper, I show that perceptions of the efficiency, naturalness, and safety of vaginal and cesarean birthing methods influence the choices women make regarding the delivery of their child.

According to surveys conducted in the United States, Sweden and Australia, 93 to 95 percent of women prefer vaginal deliveries to cesarean sections (Pevzner et al. 2008; Karlström et al. 2011; J a Gamble and Creedy 2001). The reasons a small percentage prefer cesarean deliveries include: previous cesarean deliveries, a fear of giving birth, a previously negative birth experience, medical indications for cesarean delivery, increased perceived risks of vaginal

deliveries, and decreased perceived risks of cesarean deliveries (Fenwick et al. 2010; Karlström et al. 2011; J a Gamble and Creedy 2001). Furthermore, cesarean delivery “on maternal request” is not a large factor driving the escalating cesarean section rate (Jenny Gamble et al. 2007).

Women overwhelmingly prefer vaginal to cesarean deliveries. My sample agrees with this survey data: 46 (92 percent) of the women I interviewed said that they preferred vaginal delivery, while only 4 women (8 percent) stated that they would prefer cesarean section. In addition, many women reiterated that this preference was for an *ideal* method and that circumstances during birth could change their preferences dramatically.

Methods

From June, until August of 2015, I conducted interviews with women in the postpartum ward of a major hospital. Interviews were recorded with the participants’ permission and lasted approximately ten to fifteen minutes. I used a set of guideline questions as the framework for every interview, but I allowed the conversation to deviate, so that other issues could be explored. Semi-structured interviews make quantitative analysis more difficult, because participants’ responses varied, which shines some light upon the unique personal and socioeconomic backgrounds of each woman interviewed. However, I chose to use qualitative methods because they also allow for more complex analysis, as participants can expanded beyond the restrictions of pre-determined questions. After conducting interviews, I transcribed these into a Word document. I then created an Excel spreadsheet with each participant number and easily quantifiable variables: age, household size, perceived positives and negatives concerning delivery, and marital status.

Women who preferred vaginal deliveries

The majority of the women I interviewed preferred the vaginal delivery method in an ideal situation. 46 women responded with positive factors about vaginal delivery and negative factors about cesarean sections.

Most Cited Positive Factors for Vaginal		Most Cited Negative Factors for Cesarean	
Factor	Number of Times Cited	Factor	Number of Times Cited
Shorter/Easier Recovery	20	Longer/Harder Recovery	16
More “Natural”	14	Surgery is Undesirable	12
Better for Baby	7	More Pain	11
Less Pain	6	Fear of Surgery	5
Lower Risk	6	Higher Risk	5
History of Vaginal Delivery	4	Infections	5
Less Surgery	4	Scar	4
		Baby Taken Away	4
		Medication Use	4

Table 1, “Most Cited Positive Factors for Vaginal and Most Cited Negative Factors for Cesarean”

Based on the results in the chart above, the majority of women consider vaginal delivery the ideal birth method because it has a quick and easy recovery and because it is “natural.” The focus on recovery time indicates a preference for efficient deliveries—the most-cited perceived benefit of vaginal delivery was that it has a shorter and easier recovery, while the most-cited perceived drawback of cesarean delivery was the inverse—that is, its longer and more difficult recovery period. When women described their recovery time, they expressed the greater

efficiency of vaginal delivery in terms of time saved, decreased risk, and ease. After efficiency, the second most-cited positive factor for vaginal delivery was it being “natural.” The second-most cited negative factor for a cesarean is that it is surgery, and that surgeries are worse than the “natural” vaginal delivery. Participant 125 clearly demonstrates her view that surgery is the opposite of “natural” by saying, “Because it’s more natural and you don’t need to get cut on.”

Another woman, participant 107, says,

I wanted to go natural and I’m not really into medicines and drugs. I just wanted it to happen naturally. I mean if you think about it, it should be that way. Unless there is a problem. Like I get it- like if the baby isn’t coming down and it might need to try to do it faster and the water broke. I get that, but if everything is going smoothly, I can handle it.

This clearly demonstrates women’s desire for the most “natural” birth they can achieve.

Additionally, inherent in the idea that surgery itself is negative is the idea that the most “natural” way is also the safest and most secure. One woman summarized this common idea when she said, “So it’s the way it’s intended, it’s a lot safer on the baby...It just make more sense if your body is physically able to withstand a vaginal birth.” This third desire for the safest birth is evident in almost all women’s responses, often intertwined with the desire for the “natural” birth.

Women who preferred cesarean deliveries

All four women who preferred cesarean deliveries as the ideal birth method had at least one prior cesarean delivery. These women cited four negatives for vaginal deliveries: “Feeling Everything,” “Unpredictability,” “Long Dilation Process,” and “More Complications.” They also cited the following positives of cesarean deliveries: “No Pain,” “Easier,” “Safer,” “Routine for Doctors.” These women preferred the cesarean to the vaginal delivery, but in each case, the woman’s labor was complicated by medical emergencies during the delivery.

For example, Participant 151 had a previous cesarean delivery: “I wanted to give all natural birth with no epidural or anything...and I was pretty determined to do that. But my body didn’t allow it. I couldn’t go into labor like a normal woman, so they had to do a c-section kinda suddenly with her.” The doctors told her she could still try a vaginal delivery with her second child, but she decided to have a second cesarean instead. And, although she was afraid of the surgery—“it just generally makes you very nervous”—she minimized the risk of cesarean delivery in general when she explained her perspective, saying:

I think the vaginal one looking back after two children is kinda scary, only because you know, you have all these problems that could occur. And c-sections, I mean there’s also complications, but for the most part you know that it’s going to be safe. The doctors, you know, do the same thing over and over again and for most... and if there’s complications, they can be sure to fix it right away. With the vaginal I think it’s kinda complicated.

In all four cases, the women had at least one previous cesarean section and felt that their medical situations threatened either their baby’s safety or their own. Each story reflected an aversion to the unpredictability of vaginal deliveries, which are believed to be avoided if one chooses a cesarean section. This unpredictability came along with the assumption that the vaginal delivery was actually more dangerous than the cesarean section—which depends on the complications during delivery. For some of these women, potential complications may have made the cesarean the safer option. But in two cases, the doctors suggested either vaginal delivery or cesarean delivery, and the women still chose cesarean sections. Although these women represent a small percentage of the participant population, their desire for safety—in light of their assessment of the risk from a cesarean section—surpassed their desire for a “natural” delivery.

Discussion

Three desires—for security, “natural” birth, and efficiency—fundamentally make up women’s perceptions of the ideal birth method.

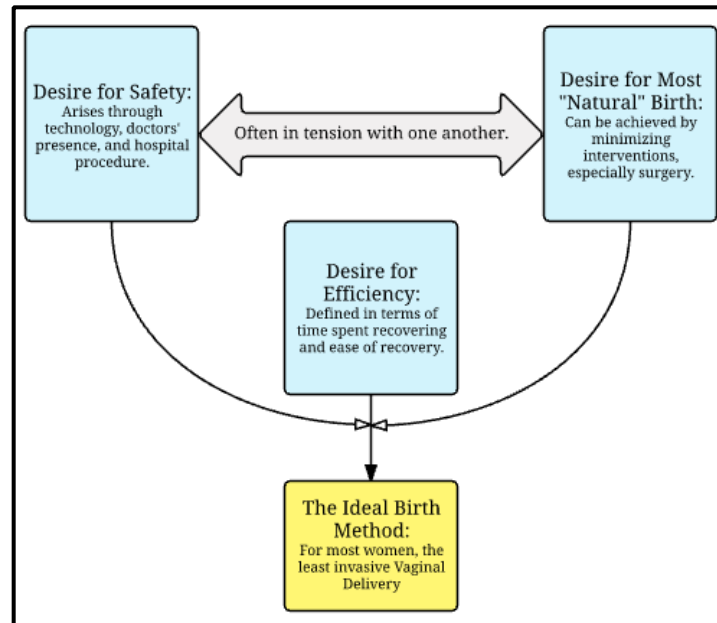


Figure 1, “Diagram of Women’s Desires that Contribute to the Ideal Birth Method”

This fundamental tension between security, “natural” birth, and efficiency is what drives women’s perceptions of the ideal birth method. But they also reflect women’s framework for decision-making during labor. Women come into the hospital with a predetermined idea of their ideal birth, and for many, this ideal birth is not achieved.

Sociocultural Influences on Birth Perspectives

Work

When I asked women if their delivery had any positive or negative effects on their ability to work, most women responded that taking time off would not significantly affect their ability to work. Participant 117, who had a cesarean section, described the majority opinion on the subject when she said: “you need to have that time off to have that bonding and to take care of your

small baby. But other than that, you return to work normal, take care of work normal.” Like her, most women appreciated that they could spend their time off with their baby and were not concerned about the financial losses of taking time away from work.

In contrast to the majority, four women felt taking time off was a negative. According to my estimates, three of these women were at or below 150 percent of the Federal Poverty Level (FPL), while the fourth was at 300 percent of the FPL. All four felt that their time off work posed a financial burden because they did not have the amount of paid maternity leave that they wanted, or any paid leave at all. Participant 108, who had an induced vaginal delivery, said, “I mean cause—gotta provide for the baby right? It’s life after you have ‘em, so...” Her statement exemplifies the issues some women face in caring for their children while trying to recover from labor. Including her, these four women felt taking time off was a financial burden because it prevented them from working for wages. When I asked women directly whether the actual cost of the delivery method was a factor in their decision, only three women stated that it was. Two of these women were at or below 100 percent of the FPL, while the third was at approximately 150 percent of the FPL. All three women preferred vaginal delivery and thought it was cheaper.

Though I didn’t ask about insurance policies, some women mentioned their insurance coverage when I asked about cost. At least 58 percent of the women in the study were eligible for Medicaid, in which pregnancy-related services like labor and delivery are exempt from out-of-pocket costs. This could partially explain why women were less concerned about lost time than expected; they did not need to cover extraneous medical bills. Additionally, some women mentioned that their workplaces provided paid leave even though it was not federally mandated. Instead of voicing concern over economic hardship, women focused on other aspects of

recovery, such as their ability to do household chores, feel active, take care of the new baby, or feel “back to normal.” I also asked women whether a specific delivery method, either vaginal or cesarean, influenced new mothers' ability to work. In response, 44 of the 50 women described the cesarean recovery as longer, more painful, more restrictive, and more difficult than a vaginal delivery.

Especially among the women at or below 100 percent of the FPL, the after-effects of the cesarean posed more potential problems. Participant 110, who had a spontaneous vaginal delivery, said, “It would’ve been different cause I would’ve had to been on bed rest...it’s a major issue ‘cause I don’t have help like, I would say normal people, but yeah. My kids depend on me, so if mommy’s sitting down, not much is gonna get done.” These women expressed concerns not just about taking care of their kids, but also about the healing itself. Participant 129 said, “I would be in the hospital longer, the procedure of labor would have been longer, period...a cesarean section I think it would’ve taken way longer and the healing process is way longer.” Even among some women whose household incomes were higher than 100 percent of the FPL, these perceptions of the cesarean recovery were widespread. Participant 132 summed up this perspective when she said:

From everything I’ve read you have to be on bed rest and you feel terrible and you’re recovering from anesthesia. I think it would’ve been really hard to feel as good as I feel now and you know...I don’t think I’d be feeling that way if I was still trying to you know, have my body heal.

However, there were six women who thought the recovery from a cesarean delivery would not be drastically different from recovery after a vaginal delivery. All these women belonged to the group of women with household incomes greater than 100 percent of the FPL. Participant 117 commented about her recovery after a cesarean:

Whatever time, like 1-2 weeks, extra time you get for recovery that's what you spend, but yeah, I don't think there is much difference. Obviously like that 1-2 weeks of recovery does dominate, and you have to take good care of yourself in terms of healing and all that stuff. I think the rest is all the same.

These six women reported the cesarean recovery as “the same” in many aspects, but also differentiated the total time away from work.

All women in the study focused on the length of recovery, illustrating their strong desire for time-efficient births. They also described the efficiency of the recovery in terms of pain reduction, quality time with the baby, and medication use. This analysis of women's perspectives on work in relation to delivery method demonstrates again how women highly value time- and pain-efficient recovery after delivery.

Significant others

Romantic partners, usually husbands, began playing a larger role during labor and delivery when hospital birth gained popularity in the 1900s and birth shifted from an event attended by female peers and relatives to one attended by the nuclear family. Thus, an examination of modern women's perspectives must include their significant others. Of the women interviewed, 90 percent were in serious relationships and only 10 percent did not have a significant other. Rather than interviewing significant others directly, I asked women how they perceived their significant others' feelings regarding a preferred birth method.

Women commonly described these feelings as “happy,” “anxious,” “supportive,” “fine with it,” “positive,” and “involved.” Overall, more positives were cited for vaginal delivery and more negatives for cesarean sections. Women presented their significant others' opinions post-delivery as very similar to their own. However, this could be attributed to the fact that many

women seemed not to have considered their significant others' feelings about the delivery prior to being asked. Many women said, “I *think* he’s happy,” (italics added) seemed doubtful, or paused significantly before answering. Participant 115 exemplifies this in her description of her significant other: “He, you know, jumped right in helping with the delivery and whatever I needed for comfort. And he was compliant with whatever the nurses asked him to do. He’s a good listener, a good helper.” Rather than describing her significant others’ feelings, she focused on his role during the delivery and his actions that helped her.

The focus women placed on themselves is also reflected in significant others’ opinions of the ideal birth method. Of the women in relationships, 26 of their significant others had no opinion on which delivery method was better.

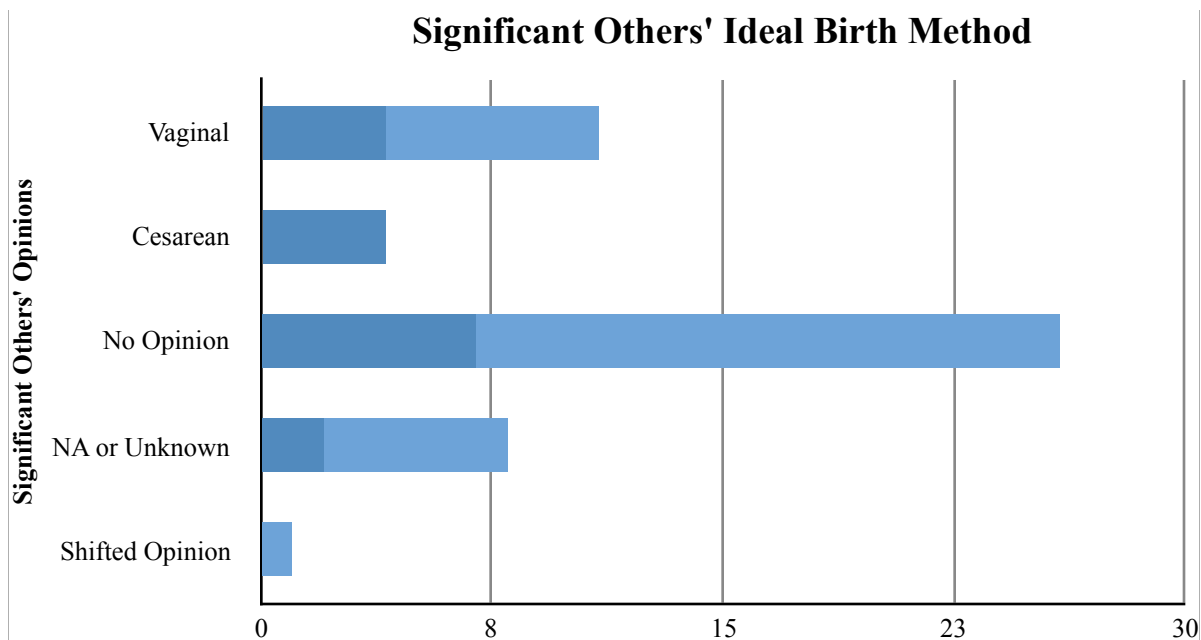


Figure 2, “Significant Others’ Ideal Birth Method”

Women’s responses reflected their power over birth decisions in comparison to their significant others. This was reflected by 15 women who said that their significant others were “supportive” of their final decisions. It is important to note here that many women felt that their

choices were independent, even from their significant other. However, this independence was often stated as a hypothetical, as most couples agreed on their views. Only in complicated situations did women seem to have a more concrete plan that they had discussed with their significant other. These women also had a more concrete idea of their significant others' feelings.

Other valued people and opinions

After discussing women's significant others, the interview moved to others whose opinion about birth matters women trusted and valued. Women usually cited one other person; 22 women chose their mother, 7 cited either a female friend or their sister, and 6 cited their doctor. "Family" was cited 4 times, "Grandmother" was cited 3 times, and "Coworker" and "Cousin" were cited twice. "Father," "Self," and "Everyone" were cited once each. 9 women said no one other than their significant other had a valued opinion on the matter.

From these valued people, 21 women were advised to have a vaginal delivery, while only 4 women were advised to have a cesarean. Conflicting advice was given to 3 women. 22 women said they weren't advised about a specific delivery method. Many women expressed the influence of these highly valued people in the form of anecdotes. For example, Participant 103, who had a vaginal delivery with Pitocin, said that her mom "never gave vaginal births, for her it was all c-sections. She honestly said it was a lot better that I pushed him out rather than a c-section 'cause she knows the struggle of recovering from a c-section. She said it was just awful for her." Like her, many women sought out birth stories and experiences or were already exposed to them prior to delivery.

Some women consulted their doctor, considering her to be a knowledgeable person whose opinion should be highly valued. These women often said that although their doctor influenced their decision, the doctor did not express an opinion. In other words, rather than considering their doctors' recommendations as an opinion, women regarded these as expressions of a scientific fact. Women did not regard the recommendations of any other person in this way. For example, Participant 104 said, "The doctor's [opinion]. Because they know more what they're talking about... It depends on the facts that they tell." Although more women cited their mother than their doctor as a person with a valued opinion, this could reflect the way women view doctors as neutral and opinion-less. Therefore, when I asked if anyone else's *opinion* was important, they responded with a close relative rather than a physician. This notion is particularly evident in one woman's response, who said, "you mean other than the doctor?"

Discussion

Significant others, mothers, sisters, grandparents, female friends, coworkers, fathers and cousins influenced women's perceptions regarding what constituted an ideal birth method. Women with uncomplicated deliveries frequently felt that their significant others were happy and supportive of their decisions, but importantly, these women felt as if they had made the decision themselves. In more complicated deliveries, significant others' opinions were more carefully considered.

There is an interesting parallel between history and this data about female networks and the nuclear family. From 1750 to the 1800s, the female midwives were expected to take care of normal, low-risk deliveries, while the male doctors were called in for complicated, high-risk deliveries. Based on my data, it seems that women primarily recruit the help of their female-

centric network, mostly relatives and female friends, in normal, low-risk deliveries. And in complicated, high-risk deliveries, the focus shifts from this female network to the nuclear family.

In American hospital birth, the female network has no physical space and is not welcome in the hospital, while the significant other is expected in the delivery room. Thus, the way women solicit other women's opinions is crucial. In America, girls are not socialized into the birth experience in a concrete way. Apart from stories that are told by each mother to her child about his or her particular delivery, few women are present during a woman's labor prior to her own. In Brigitte Jordan's seminal book examining birth practices in Holland, Sweden, the United States, and a Mayan community in the Yucatan peninsula, she describes how women in the Yucatan are exposed to the sights, sounds, and activities of birth from a young age. Women give birth in their family compounds, with the rest of the family continuing their daily activities during labor and helping with the delivery when the time comes (Jordan 1983). Thus, young girls are far more exposed to labor and delivery in those communities than they are in the United States. According to both my data and others, American women actively seek out other women's advice, watch delivery tapes or documentaries, attend childbirth classes, and read books in order to prepare for their deliveries (Sargent and Stark 1989). But when the time comes for delivery, or when there are complications, it seems that women turn to their significant other and the hospital for advice and support.

This data shows that significant others' opinions are less valued in low-risk deliveries, and that prior to delivery, women frequently prefer to consult with other females in their kin and social networks. As women seek out advice from sisters and mothers, for example, they come to emphasize their relationships as daughters and sisters, rather than as wives or girlfriends.

However, because the partner is typically the only family member present during the actual delivery, significant others' opinions become more highly valued in the delivery room and thus when complications arise. The space of the delivery room, and thus the built environment of the hospital, influences the kinds of opinions which become valued during birth. Because partners are the only family members present in the room, they are those who are consulted, and those who provide valued advice.

The hospital's built environment not only provides a privileged space for the opinions of significant others, but it is also a space dominated by the physician. Obstetricians are highly trained in the field of labor and delivery, and as such, they possess biomedical and experiential knowledge that is often highly-valued by mothers and family members. While doctors' opinions remain science-based opinions, rather than objective facts, women's reverential view of physicians illustrates the vast power physicians have in shaping women's perceptions of birth. Some women I interviewed expressed that their physician had "no opinion" about which method they should choose, indicating a possible misunderstanding between physicians and their patients. Based on the abundant evidence, in low-risk cases, physicians should be recommending vaginal deliveries in a way that all women can understand when asked if their physician had an opinion. Although some women in my study described their doctors as recommending vaginal deliveries, others did not believe their doctors recommended one method over the other, even in the simplest cases.

The hospital, therefore, significantly shapes women's birth experiences, by both limiting the space between women and their partners, and supporting physicians' influence. Prior to

entering the hospital, however, women investigate other women's opinions, financial costs, and most importantly, ways to maximize time- and pain-efficiency.

“Natural” Labor

Introduction

In American culture, the word “nature” is endowed with many meanings, but all imply a dichotomy between “nature” and culture. “Nature” is associated with wildness, the past, and our DNA, while “culture” is believed to be a creation of the human mind, social, and technological. This implies that at some time in our evolutionary history we passed from being in a state of “nature” to culture. But even early groups of hunter-gatherers were not truly culture-less or completely “natural,” because humans have always been social animals. In fact, even chimpanzees, one of our closest relatives in the animal kingdom, have culture. The only differences between the two forms of culture are that “thanks to indirect means of transmission such as language, cultural dissemination is possible over greater stretches of time and space in humans than in chimpanzees” and that “human cultures rely more intensively than chimpanzee cultures on cumulative cultural evolution through the ratchet effect, which allows the accumulation of modifications over time and produces more elaborate cultural artifacts” (Boesch and Tomasello 1998). Thus, even humans' most “natural” relative still has culture. Thus, the distinction between what we call “natural” and what we call “cultural” is itself influenced by our ways of thinking and environment. In short, when we ascribe the values of “natural” or “cultural” to an event or thing, the act of ascribing those values is also shaped by culture.

In an essay comparing nature, culture, and gender, Carol MacCormack describes the nature-culture divide: “The ‘natural’ is that which is innate in our primate heritage and the ‘cultural’ is that which is arbitrary and artificial” (MacCormack 1980). This notion is evident in the contradiction between our romanticization of our past state of “nature” and our celebration of the innovations and discoveries of “culture.” The “Paleo Diet,” for example, is a form of dieting that surged in popularity in 2013. The creator of the diet, Loren Cordain, has a Ph.D. in exercise physiology and recently wrote a blog post titled “A Brief History of the Contemporary Paleo Diet Movement.” In this, he describes how his understanding of the hunter-gatherer diet—high in animal protein and omega 3 fats, low in processed food and refined sugar—led to his creation of the “Paleo Diet.” He says, “we need to balance our hunter gatherer genetic legacy with the best technology of our modern world” (Cordain 2015). Regardless of whether or not the diet is effective, its name and philosophical root in a “natural way of living” appeal powerfully to Americans. “Paleo” emphasizes the belief that “nature,” though imperfect and in need of the technological innovations of culture, is fundamentally healthy—and we can somehow return to it. Cordain exemplifies this common paradox when he uses scientific studies—fundamentally a product of technology and culture—to provide evidence that his “natural” diet is healthy. In fact, Cordain’s use of the “technology of our modern world” exemplifies how people treat technology and culture as synonymous when contrasting the “natural” and “cultural.”

There is a similar nature-culture or nature-technology tension in women’s conception of birth. In this study, women’s use of “nature” and “natural” to describe birth contrasted with the highly technological world of medicine, which can be seen as one of the great achievements of culture. Moreover, associations between gender and nature further complicate this tension. In

MacCormack's essay, "Nature, culture and gender: a critique," she argues that femininity has been discursively linked to "nature" while masculinity is associated with "culture." She also argues that Western culture is predicated upon the myth that mankind must control or have "dominion over nature." In the context of the nature-gender ties, she claims, "when women are defined as 'natural' a high prestige or even moral 'goodness' is attached to men's domination over women, analogous to the 'goodness' of human dominion of natural energy sources" (MacCormack 1980). Within the context of history and the male-driven medicalization of childbirth, the weight of the word "natural" in childbirth becomes all the more significant; it symbolizes, in one word, the models of the anti-hospital-birth movements.

Maternal and infant mortality significantly decreased as doctors came to more regularly attend births, and hospital delivery became the norm in the United States. The increasing safety of childbirth meant that most American women no longer seriously feared death in childbirth, due to the discovery of antibiotics and increasingly successful surgical techniques. However, due to hospitals' focus on improving safety—as both a public health goal as well as a legal obligation—birthing was highly medicalized, and it came to be treated as a problem to be solved rather than a normal, physiological process. This view prompted backlash, resulting in the "Natural" Childbirth Movement in the 1940s and the Home-Birth and Alternative Childbirth Movements of the late 20th Century. In response to these movements, the medical establishment has superficially responded to women's desire for more "natural" deliveries. However, the legacy of medicalization and the view of labor as pathological persists.

Hospitals today allow women to stay in private rooms with soft lighting, televisions, and other amenities, but hospital routines remain highly standardized. In rare cases of labor

complication, hospital services are instrumental to saving lives. This is undeniable. But for the majority of women whose labors are routine, the hospital enforces rules, monitors labor, and imposes interventions that can be seen as negatively interfering with “nature.” Hospitals superficially changed their practices and used the potent word “natural” to attract women to deliver at their institutions. In turn, some women have also adjusted their definition of “natural” birth to fit within the hospital context. Thus, an in-depth examination of the way hospital-birthers use the word “natural” is necessary to understand the evolution of the term's meaning.

The Three Types of “Natural”

Any Vaginal Delivery

Some women referred to “natural” as synonymous with vaginal delivery, or said that vaginal delivery was “more natural” than cesarean delivery. Participant 108 described vaginal birth by saying: “it’s natural, it’s the natural way to do it. And I’d rather not be cut into if I don’t have to be. So a vaginal is what I’d do if I have another baby.” She had both medicine to induce her labor and an epidural, yet she still used the word “natural” to describe her vaginal delivery, implying that vaginal and “natural” were synonymous. Participant 113, who had an induced vaginal delivery, described the view that a vaginal was “more natural” when she said, “I just feel like it’s more natural rather than, that way, than vice versa, than cut—you know, during c-section.” Participant 110 said, “Well all birth is natural. Well, vaginal just seems more natural because your baby is coming from where he entered basically,” and Participant 125 said, “it’s more natural and you don’t need to get cut on,” emphasizing the view that the “cutting” part of the cesarean is what makes it unnatural. In this context, the term “natural” seemed to mean the least

invasive method, where the “natural” process of labor is undisrupted by surgical tools, but can be disrupted by medicine.

Thus, many women viewed the vaginal delivery as either “natural” or “more natural” because of the way the process occurred. They often contrasted this view of the progress of “nature” with being “unnaturally” cut. For these women, a “natural” birth could occur in the hospital with medicine—either epidural analgesia and/or oxytocic drugs used to induce labor—but a “natural” birth was not a cesarean section. For many American women, including my research subjects, a normal or “natural” birth takes place in the hospital, under the influence of an epidural, monitored by machines, and supervised by doctors. Most women have not studied the history of childbirth in America or seen or heard of childbirth conducted through any other means. The concept of “natural” birth is relative to the context of what is considered normal in America, and this conception reflects the ease with which women accepted technology in their deliveries.

Vaginal Delivery Without Any Drugs

The second group of women conceived of a “natural” delivery as one without any drugs at all. However, all the women gave birth in the hospital and they did not necessarily want drug-free, “natural” births for themselves. Participant 112 explained her definition as follows:

See it’s three things, it’s natural, it’s vaginal and it’s a c-section...C-section: get cut open from your stomach, and you don’t feel the pain, but afterwards you feel your pain. After a couple of hours after you have your baby you feel your pain. Vaginal, you get dosed up and you get medicine and everything, you get epidural in you back, and your body is numb and everything, so you don’t feel anything, ‘cause you paralyzed from your stomach down to your foot for a couple of hours. And um...natural you just feel everything, ‘cause you don’t get any medicine in your IV, you don’t get an IV, and you also doesn’t get an epidural, you just feel everything. That mean if you get cut open, if the baby pushing his head out or her head out and the baby rips you or anything, or if they have to take the sponge or anything or suction the baby out you feel all of

that. And when I say you feel it all, you feel it all. So I'd rather go with the vaginal than feel me getting cut open or feel me getting ripped open or anything like that, 'cause I am a nervous person. So vaginal, I would go with vaginal any day.

Her conviction that a “natural” delivery meant one without drugs of any kind even extended to a cesarean section, which if done “naturally” would mean getting the surgery without any anesthetic. Understandably, she chose not to do the “natural” delivery. However, her perspective is interesting in that the distinction between the “natural” and the vaginal hinges on the epidural and feeling the pain of delivery.

Other women focused on the positive aspects of “natural” delivery without an epidural rather than the pain. Participant 107, for example, believed in “natural living” and came into labor and delivery with an extensive birth plan. She said:

I wanted to go natural and I'm not really into medicines and drugs. I just wanted it to happen naturally. I mean if you think about it, it should be that way. Unless there is a problem. Like I get it—like if the baby isn't coming down and it might need to try to do it faster and the water broke. I get that, but if everything is going smoothly, I can handle it...I feel like really proud that I gave birth to my baby versus having my baby like, taken...and to me, natural is the best, just like eating natural foods. Would you rather eat the McDonald's meal, or eat something that you made at home and you know was healthy? So the vaginal birth is the natural way. Having a c-section is like, you know, just not the best. But if you don't have any other choice, it's best to get the baby out and healthy. It should just be last resort.

For other women, their desire for “natural” birth was subsumed by their desire for safety in the face of complications. For example, Participant 141, who had just had her first child by cesarean, said:

I've never had a natural delivery so...it's the pain, it's like I said what your body is designed to do. So it's the way it's intended, it's a lot safer on the baby. It releases chemicals in your body, and you know, medications and things. It just make more sense if your body is physically able to withstand a vaginal birth...It was a lot of hard decisions, and um, I felt like I gave up.

For all these women, “natural” birth was defined as a birth without an epidural or oxytocic drug.

For some the focus was on the pain, while for others the focus was on the benefits to the baby

and mother. For yet others, “natural” birth aligned with their general life philosophy. Many of the women had support or advocates that helped them pursue their “natural” births.

Vaginal Delivery Without Oxytocic Drugs

The third group of women, though smaller than the other two groups, saw “natural” birth as something in-between the first two definitions. In this definition, the baby needed to come “naturally.” Participant 119 had an induced vaginal delivery and said, “I guess if I had wanted to go home that day, yesterday, and said I want her to come natural, I wouldn’t have had any problems with it.” In this case, the dichotomy between “natural” and “unnatural” is about how labor begins and whether its caused by an external or internal process. For example, Participant 148 said she wanted “to see if [labor] would happen naturally this time without the induction.”

In these cases, women are stressing the start of labor and the view that induction is not as “natural” as labor that starts on its own. For these women, having an epidural was not a factor in defining “natural.” This shows both the reliance on technology, through the inclusion of an epidural as “natural,” and the desire to have fewer interventions in birth, through the dislike for induction. Even though it appears that women prefer not to induce, 48 percent of the women in this study had their labor induced by oxytocic drugs. As the next section explores, the epidural and induction of labor are commonplace. Women see these two technological interventions as both improving efficiency and safety but also potentially limiting the “natural” aspect of birth.

Choice and the Progress of Labor

Following Brigitte Jordan’s seminal work, “Birth in Four Cultures,” many anthropological critiques of the American birthing system have been put forward. The Technocratic Model of

birth, as described by Robbie Davis-Floyd (2001), is particularly relevant to any analysis of hospital birth. This model of childbirth focuses on the separation of mind and body and views the female body as a defective machine. Floyd shows the ways in which this model relies upon an expert practitioner to "treat" birth rather than relying on embodied forms of knowledge, standardizes care, overvalues technology and science, prefers aggressive interventions, focuses on reducing mortality to the detriment of increased morbidity, and is ultimately profit-driven and intolerant of other models (2001). This description represents one of the harshest critiques of hospital birth in the anthropological literature, and no woman's experience at Barnes-Jewish Hospital completely reflects the Technocratic Model's tenets. Rather, it is important to understand these observations and note how hospitals and physicians choose to diverge from them and incorporate new models of care. This section focuses on how women, physicians, and Barnes-Jewish Hospital interpret and adapt one key tenet of the Technocratic Model: the ultimate control and authority over birth is given to the practitioner rather than the woman giving birth.

Control, authority, and choice have been written about extensively in the anthropological literature, especially with a focus on the midwifery model of care. Brigitte Jordan, a distinguished pioneer of anthropological childbirth scholarship, describes the power of this authoritative knowledge in childbirth. She first defines authoritative knowledge: "for any particular domain several knowledge systems exist, some of which, by consensus, come to carry more weight than others, either because they explain the state of the world better for the purposes at hand (efficacy) or because they are associated with a stronger power base (structural superiority), and usually both" (Jordan 1997). She adds that people not only accept one form of knowledge as superior, but also enforce it or support its production, even when it may not

actually be the “correct” form of knowledge. Thus in certain situations, one group of people’s knowledge is considered better and more valuable than another’s. In childbirth, the knowledge that counts—the authoritative knowledge—belongs to the physician while the woman’s knowledge does not count. Jordan provides a case study in which a laboring woman is told by her nurses not to push until the doctor, the only one able to “authorize” pushing, arrives. Jordan describes how the doctor’s authority is upheld not only by the hospital establishment, but by the woman and her husband as well—both of whom submit to the authority of the hospital staff. Jordan argues that the reason the woman and her husband submit, however, is complex; the hospital staff are the “gatekeepers” to the interpretation of technology, and this interpretation of technology is agreed upon as the source of authoritative knowledge. In the end Jordan says, “she isn’t giving birth, she is delivered” (Jordan 1997). Therefore, in Jordan’s case study, the way hospital staff present information and the way women interpret it is a mutual endeavor that reproduces the authoritative knowledge of the physician through the technology used to regulate and monitor birth. However, one can argue that all birth experiences are shaped by the authoritative knowledge, and consequent power, of those attending the birth—even midwives. Still, the ways in which medical practitioners in hospital settings manage authoritative knowledge remains more complete and dominant than the authority of other birthing perspectives.

Margaret MacDonald, in a book about midwifery narratives in Canada (2007), describes how midwives try to protect women’s control and authority during birth—even when they want midwives to shoulder the responsibility. MacDonald identified “informed choice” as the most important aspect of midwives’ model of care, saying, “the principle of informed choice in

midwifery is based on the notion that women can and should understand the rationale behind different courses of action in their maternity care and thus be in a position to share the responsibility of making important decisions about their own care” (MacDonald 2007). She then notes that midwifery philosophy and practice support women’s authority in childbirth. MacDonald argues that midwives sometimes felt they needed to encourage women to assume responsibility during birth, as it was central to their ability to guide women’s births. Though midwives in her ethnography encountered these women, who were reluctant to claim authority, there were others on the opposite end of the spectrum who were certain of what they wanted in spite of midwives’ advice. In these situations, MacDonald describes how midwives tried to honor women’s “informed choice” even when those choices did not fall within the midwives’ standards of safety, at least to an extent. MacDonald relates the story of a woman with a low hemoglobin count whose midwives repeatedly advised her to give birth in the hospital to no avail. A midwife still attended the woman’s home birth, but called an ambulance during labor, which the woman refused. The midwife then stayed and delivered the baby even though she did not feel that it was the safest method. This represents an extreme case in which one midwife described the limits of “informed choice,” but in most scenarios, the women and midwives came to mutual agreements about courses of action during birth.

In this study, most women’s responses reinforced Davis-Floyd and Jordan’s findings that control and authority were given to doctors and the hospital rather than women. However, some aspects of this “informed choice” principle were also present—some women chose an option their physician did not advise them to. Of the 50 women in the study, 35 (70 percent) said they had complete or partial choice, while 13 (26 percent) said they did not have choice. The

remaining 2 women (4 percent) had extraordinary birth experiences, for example, one woman did not recognize her pregnancy until labor began, and thus did not comment on the issue of choice.

A True Choice?

During each interview, I asked, “Did you feel like you had choice in your delivery method?” In response to this, 35 women (70 percent) said they did. After indicating yes or no, however, women often described aspects of birth they were able to control within hospital parameters, rather than describing themselves as controlling the whole birth experience. Although only 9 out of the 35 women explicitly said they had control over just a part of the experience rather than the whole experience, most women’s statements reflected this sentiment.

Many women qualified their answers after saying, “Yes, I did have choice.” Participant 123, who had a vaginal delivery induced with Pitocin, said “I...yeah...my doctor was very clear, she was fine with me either choosing an induction or waiting. And I liked the idea of induction.” In her mind, she only had the two choices her doctor gave her. Virtually all the women in the study described their doctor’s influence this way. Participant 111 said, “when there were things... stressful points, the doctors would give options of what to try or you know what direction I wanted to go with it. So I felt like they were giving me an option.” Participant 116 said, “both options were given to me, but one of them was more safe. Probably the better route to go, given the circumstances?” Participant 125 said, “I had the choice to either wait it out or have a cesarean. I wanted it vaginal so that’s why I had it.” She later said, however, “they pretty much decided. I wouldn’t mind.” Language like this was almost universal—women said they had

choice, but they also contradicted themselves and described how doctors made the decision or offered parameters to choose from. This language demonstrates how women see themselves as separate from doctors. Instead of describing decision-making as a team effort by using “we,” women used “they,” indicating a lack of team mentality.

Only a few women who had uncomplicated deliveries or those who chose cesarean sections over their doctors’ recommendations felt they could have pursued options that the doctor did not recommend. Unsurprisingly, the women who had spontaneous vaginal deliveries without any synthetic oxytocin use or major complications were particularly certain that they had choice and that if any complications had arisen, they would have made the ultimate choice. For these women, birth was easy and free of difficult decisions that caused conflict between doctor and laboring woman. To understand the relationship between doctor and woman, and its effect on a woman’s decision-making, I analyzed more difficult birth experiences that tested the limits of the doctor-woman relationship.

Participant 147, who had a cesarean section, described the way doctors present birth options: “Yeah, [the doctors] gave me all the options and they gave me kind of situationally when those options would change. And how they would change. And so I don’t—there wasn’t anything that I was presented with that I didn’t agree with.” Participant 117 said, “Definitely, yes. My doctors always offered me that I can choose to wait and see, but they always educated me about my risk factors and what would happen.” First, these statements illustrate women’s desire to claim control and choice in “gray” situations. Women who had uncomplicated deliveries assumed that they had control because the right to individual freedom and control over one’s body are dominant discourses in America. For these women, there was nothing during their

labor and delivery that spurred them to consider whether their control had been challenged, and therefore they assumed they had been in control the entire time. Participants 147 and 117, however, relied heavily on their doctors' recommendations when complications arose, and as such needed to justify the fact that they still had control. Thus, when faced with a direct question about control, they presented their doctor's opinion as though it were a fact. By doing this, they could claim that they had been presented with neutral information and made a decision based on their estimation of the doctor's expertise. While choosing to rely on a physician's expert opinion in order to make an informed decision is a form of control, it ignores the vast influence that physicians have in shaping the way women think about complications and how they act during birth.

In fact, the comments from participants 147 and 117, which were echoed by the majority of the other participants, reflect their doctors' emphasis on potential negative outcomes rather than positive ones. This can be explained by the history and development of obstetrics in America. Early American obstetricians focused on treating pathological births, while midwives handled the "normal" ones. As hospitalization during labor and delivery increased, medical doctors increasingly managed more "normal" births, bringing with them the view of all birth as pathological (Barker 1998; R. E. Davis-Floyd 1994). Undoubtedly, the medical profession has made great strides in improving outcomes when faced with truly pathological birth conditions. Thus, their focus on negative outcomes has certainly had concrete benefits for women's health. But the emphasis on risk factors and potential issues during birth can also influence women's perspectives and decision-making about birth. In fact, it has been proven that framing a choice in terms of negative rather than positive factors increases the likelihood that people will choose a

risky decision (Levin, Schneider, and Gaeth 1998). When doctors describe the many potential negative outcomes when facing a birth complication, in contrast to the one positive outcome of a healthy baby, they are framing the decision to intervene with negative attributes. Thus, women choose to intervene in order to avoid those negative outcomes. Not only does this framing push women to choose more interventions, but doctors' pathologized view of birth also negatively primes women to expect the worst during labor.

By looking at women's narratives as a whole, this fear of pathological labor is evident. Driven both by women's desire for safety and the way doctors present birth, the fear prompts many women to compromise on their ideal birth method in the name of safety. In this study, 92 percent of the women identified vaginal birth as the ideal birth method, but only around 66 percent actually had a vaginal delivery. This may be attributable to life-threatening complications that obstetricians successfully managed through necessary life-saving intervention. However, only 30 percent of women had a vaginal labor without synthetic oxytocin—another intervention that women seemed to dislike but saw as a “necessity.” Therefore, around 50 to 60 percent of the women in the study did not give birth through their ideal method. I was unable to see women's charts and the medical indications for induction, so some of this may be attributable to pathological births. However, according to the World Health Organization's *Recommendations for Augmentation of Labour*, “a significant proportion of women with uncomplicated pregnancies are subjected to routine augmentation of labour with oxytocin” (“WHO Recommendations for Augmentation of Labour” 2014). Thus, women give doctors authority over the birth and physicians greatly influence women's choices, as the Technocratic model

would predict. However, upon looking at doctors' interactions with women during labor, aspects of what MacDonald calls "informed choice" are clearly present.

A case study: Whatever happened to Janie?

"Informed choice" relies on the assumption that both the patient and the physician have important knowledge in regard to decision-making. In fact, a recent trend in medicine—shared decision-making—reflects a similar idea. An article published in *Social Science and Medicine* defines shared decision-making as "a mechanism to decrease the informational and power asymmetry between doctors and patients by increasing patients' information, sense of autonomy and/or control over treatment decisions that affect their well-being" (Charles, Gafni, and Whelan 1997). The same article describes how informed consent implies "at least a minimum of shared decision-making in the form of patient consent to treatment prior to any intervention" and that "informed choice" goes one step further to involve "disclosure of treatment alternatives rather than merely informed consent" (Charles, Gafni, and Whelan 1997). This recent interest in shared decision-making reflects the wider trend in medicine toward patient-centered care and away from paternalistic medicine, in which "the physician is dominant and autonomous and bears sole responsibility for making treatment decisions" (Frosch and Kaplan 1999). This latter view reflects the Technocratic Model's paradigm, which medicine is trying to move away from through the new focus on patient-centered care. How successful hospital and physicians have been in including patients in medical decision-making is still controversial, and most articles (Frosch and Kaplan 1999; Charles, Gafni, and Whelan 1997) limit shared decision-making to non-emergency situations. Thus, in emergency obstetrical situations, it appears that most doctors

would retract their attempts to include women in decision-making, whereas MacDonald's study shows that most midwives would continue to include women in decision-making even during the most stressful parts of delivery—even perhaps seeing this inclusion as essential (MacDonald 2007). Therefore, though “informed choice” and shared decision-making share a common goal, they are distinct when it comes to obstetrical decision-making.

To investigate how physicians and women interact with respect to decision-making, I will investigate Participant 131's story. Participant 131, who I will now refer to as Janie, exemplifies many of the characteristics of women in the study; at the time of the interview she was 24, in a relationship, and wanted a spontaneous vaginal delivery without oxytocic induction. Her birth did not end up in the way that she wished—something that happened to many women in this study to varying degrees. In the following passage, Janie describes the way her birth transitioned from a vaginal delivery to a cesarean section:

So things kind of ended up changing near the end of the birthing process. Basically we chose an induction date because she had gotten past her due date. We came in on the induction date, started that process, everything went really well for the most part—the beginning. I started progressing pretty well. I got up to 6 centimeters dilated and they decided that at that point it would be really beneficial for them to break my water to hopefully keep the process continuing. But then I had requested for an epidural at that time, so I had an epidural and they had broken my water and at that point I kind of stopped progressing. So for about the next 6 or 7 hours I had made no progress from that point. The baby's heart rate was showing some signs of distress because I had gone so long into that process and I think it was close to 11 hours before we ended up going into the idea of a c-section. So, like, we had almost extended the 12-hour time limit for vaginal births and with—because they had broken my water and everything they were kinda concerned. And my heart rate and everything was really elevated and they were concerned about infection. So that was when the OB doctor made the decision. She's like ‘I really would like for you to seriously consider c-section because of the elevated heart of the child, your elevated heart rate and because of the possible infection.’ So I was rushed for a c-section.

Janie's defers to her physician's opinion and repeatedly uses language reinforcing the separation between herself and the hospital staff: “they decided” to break her water, “the OB doctor made the decision.” Unlike home births with midwives, in which women cite feeling like they are a

part of a team (MacDonald 2007), this language of separation shows that women in the hospital don't feel this same sense of teamwork and cooperation. However, Janie directly quotes her doctor, who presents the information she values—based on technology and her medical education—but leaves the ultimate decision to Janie. This resembles MacDonald's principle of "informed choice" that is central to midwifery care. But Janie then reverts to the passive "I was rushed for a c-section," suggesting again the separation from the physician and separate decision-making. When I asked Janie directly whether or not she had choice in her delivery method, she said:

Um, yes. Yes and no. I mean, I think based on...just because...me not having any medical background, I would trust the doctors that are assigned to me more so than my own research that I've done prior to delivery. Just because, you know, this is my first time and everything. So... yeah, but no, I trust what they did and the choices that they made. And I felt like my voice was heard, it was just swayed a little bit. They knew what was a good choice and so they pushed me toward that. But I don't feel that they made the decision for me, they helped me be informed.

Janie essentially argues that the choice she made was indirect—she chose to trust her doctor to choose. There are three statements in Janie's response about choice that are particularly contradictory and interesting. She says, "I trust what they did and the choices that they made" but also says, "they knew what was a good choice and so they pushed me toward that" and "I don't feel that they made the decision for me, they helped me be informed." The first statement implies informed consent, the second implies shared decision-making, and the third implies "informed choice." It is unclear which of these three gradations of information-sharing the Janie-physician relationship fits.

Most women in this study entrusted their birth decisions to an experienced practitioner and expressed differential, at times contradictory, levels of information-sharing. Janie described some of her personal frustrations regarding the information-sharing, saying:

You know, I'm a first-time mom, first time through pregnancy and so I was—had a lot of questions...and not that I didn't get my questions answered—my questions were often answered, but I never was given you know, more extended information because I didn't always know the right questions to ask. So I didn't ever feel like I was over-informed. And I would have preferred that if possible. But you know, they were always very kind, and you know, everyone was great to work with. Just being more informed through the OB and the nurses would have been really beneficial prenatally, even before starting the birth thing. But like, ever since stepping into the hospital, I feel like we've been really well taken care of, really well-informed for the delivery process. And in every step that they took they made sure we were very informed about the good and the bad, about every decision. So I felt really, really great about you know, everything in the hospital. And we've been really... well cared for since we got into the department and everything.

This passage shows how important it is to understand each patient's needs. Janie wanted more information in order to feel secure and make decisions prenatally, but she felt she had the appropriate amount of information-sharing while in the hospital. The “informed choice” principle, as MacDonald describes it relies on deep, long-term relationships between midwife and woman both before and after a delivery (MacDonald 2007). In this passage, Janie clearly states that her doctor employed the principle of informed consent as she does not use any words to clearly claim authority for herself.

Whether or not Janie and her doctor employed a shared decision-making strategy, or employed some degree of “informed choice” or informed consent, is impossible to determine from this data. What is important to note, however, is that Barnes-Jewish Hospital does not fully ascribe to the Technocratic Model. This is clear through physicians' sincere attempts to include women in decision-making and the fact that they allow women to choose options they do not recommend—whether women choose to intervene or wait. However, many vestiges of the model remain. Janie's description of her hospital experience reflects the power differential between the hospital staff and laboring women, as well as her reliance on physicians for information. Though the degree of information-sharing is unclear, there is certainly no strong conviction that women's

experiences are equal to those of the birth attendant—which is what midwives claim (MacDonald 2007).

Conclusion

Within the entrenched American system of hospital birth, women in this study felt relatively happy and satisfied with their births, their method of delivery, and their treatment in hospitals. Hospital treatment of laboring women has dramatically improved since the Twilight Sleep and bed restraints of the 1900s. Now, women feel far more comfortable and hospitals have begun to move away from the Technocratic Model's tenets. However, women in the hospital are still not entrusted with the true responsibility of managing their births and do not see themselves as collaborators in the labor team—which they do in account of midwife-guided birth.

Nonetheless, there appears to have been a “softening” and restructuring of the Technocratic system at Barnes-Jewish Hospital, in which physicians value women's opinions and attempt to include them in the birthing decisions, but do not actively encourage women to take even more ownership of their birth experiences the way midwives do in various ethnographic accounts (MacDonald 2007; R. E. Davis-Floyd 2003). Physicians still have authoritative knowledge because of their medical education and capacity to understand the technology of birth. Women see this knowledge as completely factual, when it is actually a combination of scientific knowledge, medical opinion, cultural ideas about “ideal” birthing methods.

There is abundant evidence that physicians and medicine are not neutral or nearly as evidence-based as people believe it to be. For example, a review of twenty-two studies compared outcomes for women delivering in the lithotomy position, in which a woman lies on her back

with her feet in stirrups, to women delivering in an upright position, in a squatting stool, on a birth cushion, or in a birth chair. The review found that compared to women in the lithotomy position, those delivering upright had fewer assisted deliveries, fewer abnormal fetal heart rate patterns, and more cuts to widen the birth canal. However, the review found a higher likelihood of blood loss for women in the upright position compared to the lithotomy position. There was almost no difference between using the squatting stool and lithotomy position, except that women in the squatting stool group had fewer abnormal fetal heart rate patterns. Women who delivered with a birth cushion had shorter second stages of labor and fewer assisted deliveries than those delivering in the lithotomy position. Finally, there were few significant differences between using a birth chair and delivering in the lithotomy position (Gupta, Hofmeyr, and Shehmar 2012). Thus, based on all the scientific evidence, the lithotomy position is not scientifically safer than the other positions during labor, and more research needs to be conducted in order to determine the safest delivery position. And yet, the lithotomy position is widely accepted as the norm in hospitals.

Proponents of “natural” childbirth argue that lithotomy is the accepted position in labor because it is easier for the physician to examine the woman and intervene, or because it is the easiest position for women to labor in when encumbered by all the accoutrements of a modern, technological delivery—an IV, an epidural, and a fetal heart rate monitor. Even in reality television shows about childbirth, women almost exclusively give birth in the lithotomy position. The lithotomy position has endured despite scientific evidence that it is not necessarily the best position for labor.

Women's trust in their physicians is not completely misplaced. Clearly, physicians have made drastic strides in improving outcomes of pathological birth and have the same goal of achieving healthy births as women do. But American women have little choice in who attends their birth. The predominate experienced birth practitioner is the doctor—around 98 percent of women deliver in the hospital (Macdorman, Declercq, and Mathews 2013) and American obstetrician-gynecologists have a near-monopoly on birth. Women who choose midwives often felt ostracized from the mainstream community for choosing a hospital birth (MacDonald 2007; R. E. Davis-Floyd 2003). The example of the lithotomy position simply illustrates that trusting a physician's knowledge is each woman's choice—but it is a severely restricted one.

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Temples in New Kingdom Egypt and Early Dynastic China

Caila Coale, University of Michigan

Introduction

Temples have long been constructed as sites of worship of gods, spirits and deities. Due to the tremendous religious, historical, and even political, significance of temples, their architecture usually represents the best of a society's craftsmanship and design (Britannica 2015). The particular milieu in which temples have been constructed create a wide variety of architectural designs, styles and inspirations. Such a variety can be seen between the stone temples constructed in New Kingdom Egypt and the wooden Buddhist temples of China. The temples in Egypt and China were not only constructed out of rather different materials, but they also were imbued with different cultural meanings, and performed different roles in their respective societies.

Adaptation of the fundamental architecture required by Buddhism in India to fit the needs and style of the Chinese began during the centuries of disunion between the fall of the Han Dynasty and the unification of the Sui (Steinhardt 2005). With many foreign rulers trying to claim control, the similarly foreign Buddhist temples were embraced and quickly spread to become a central fixation throughout China (Irons 2010). Views on the world and the cosmos greatly influenced its construction and adaptability while making a connection with the people of the culture (Irons 2010). Since access to the wooden temple was granted to the common person, its role as a religious beacon took hold (Steinhardt 2005). Egyptian stone temple construction flourished at the start of the New Kingdom and similarly strove to create a place where a

spiritual and physical connection could be made to the gods (Wilkinson 2012). Unlike Buddhist temples in China, however, Egyptian temples were not intended for use by the common person; instead, they were a physical locus where cultic rites could be performed by priests (Wilkinson 2012). Despite Egyptian temples' exclusive use by religious elites, the temples influenced the lives of everyone in the area—whether this was through the economic strain the edifice's construction put upon the populace, or the community-oriented services provided by the temple's administration (Bleiberg et al. 2005a). Each temple represented a source of power, symbolically showing the regulation of cosmic balance, justice and order that was expressed through its architectural metaphors (Bleiberg 2002). While variations in the architectural style of both Buddhist temples in China and New Kingdom temples in Egypt reflected the ideological views and practices of the respective cultures, New Kingdom temples served more than a religious purpose; they contributed to the basis of the Egyptian economic and social spheres.

Architecture and Religious Significance of New Kingdom Temples

Temples within the New Kingdom of Egypt all followed a similar temple complex representative of society's religious views. With the start of the New Kingdom around 1550 BC, stone was a prominent resource and therefore was the primary building block for all parts of the temple (Bleiberg et al. 2005c). The outermost part of the temple complex was called the *temenos* which was a large brick wall arranged into the hieroglyphic sign for water that surrounded the temple structure, separating it from the profane of the outside world (Bleiberg 2002). Just inside the *temenos* was the entrance to the complex called a pylon, which consisted of two large stone, trapezoidal towers that framed a doorway on each side (Bleiberg et al. 2005c). Decoration of the

pylon normally included depictions of the enemies of Egypt being destroyed by the King who restored order, symbolizing the triumph the temple had over chaos (Bleiberg et al. 2005c). In front of the pylon, poles with banners represented the god or goddess that the temple was dedicated to (Bleiberg 2002). Massive statues of pharaohs and obelisks were typically constructed in front of the pylon to serve as focal points of worship (Bleiberg et al. 2005c). The path leading through the pylons on the way to the temple was called “god’s road” and led to the opening of the temple called the forecourt (Bleiberg et al. 2005c). This open rectangular courtyard was as far as the public could go, and was a place in which ritual altars could be set to perform ceremonies (Bleiberg et al. 2005c). Attending the ceremonies and being in the grace of the gods was so important to the people, that elites would seek permission from the pharaoh to erect statues of themselves in order to still attend the ceremonies after death (Bleiberg et al. 2005b). The brightness of this external courtyard produced a sharp contrast to the darkness that took over one's field of vision as the visitor walked closer to the image of the god within the temple (Bleiberg et al. 2005c).

The darkened interior portion of the temple past the courtyard was not accessible to the public and was composed of four separate rooms. The hypostyle hall was the beginning of the inner sanctuary, where columns created a slanted roof with enough space to allow a small bit of light to enter (Bleiberg 2002). With diffused light entering the room, one would be greeted with a dark and shadowy marsh-like setting (Bleiberg et al. 2005a). The columns were decorated to appear as papyrus and lotus plants to symbolize the creation of the world, when water was turned into marsh (Bleiberg et al. 2005a). Appearing darker than the rest of the rooms within the temple, the innermost chamber called the naos, housed the image of the god which normally was

constructed out of wood, stone or gold (Bleiberg 2002). Progressing up to the shrine, the floor slowly rose so that the sanctuary was the highest point of the temple floor, representing the first land to rise from the waters (Bleiberg 2002). Here, the high priest alone would help the god in its daily routine (Bleiberg et al. 2005c). Although the practice of the cult was mainly independent, the beliefs were still widely held by the general public and influenced the construction of the temple.

Economic and Social Influences of the Temple Complex

Although the average person was not involved in temple rituals, the public was received in auxiliary buildings to the temple proper. Since providing gifts to the gods was a crucial expression of devotion, dedications in the form of cattle, produce, land and other resources were often made to the temple by lay individuals (Wilkinson 2012). The temple's many structures not only housed the gifts it received, but it also produced its own resources which needed to be stored (Wilkinson 2012). The complex generally included storehouses, granaries, kitchens, and slaughterhouses to accommodate all of the resources coming into—and produced by—the temple (Bleiberg et al. 2005c). These resources were used to maintain the priestly classes as well as pay a large number of workers who were hired to keep the extensive temple farms and estates running (Wilkinson 2012). The several buildings and countless employees needed to manage the temple estate reflect the ways in which the temple was prominent not only for its ecclesiastical worth, but for its centrality in local politics and economies.

The temple complex also functioned as an educational institution. The educational component of the temple was deemed the "House of Life"—however, this was not an educational

resource for everyone. Rather, the "House of Life" was an exclusive center for certain individuals who were admitted in order to obtain a special, highly valued skill (Wilkinson 2012). Those with special skills compiled important texts in the "House of Life" which included textbooks of medicine and astronomy as well as spells to protect the living and the dead (Bleiberg et al. 2005b). The knowledge and texts produced by the institution influenced not only how other cultures came to perceive Egyptians, but also aided in exacerbating social inequality. Since the "House of Life" was only accessible to those with special skills, or political elites, the House created a class within society that was divorced from commoners, who in general lacked religious knowledge, social connections, or economic resources.

Although the temple's educational opportunities solely benefitted elites, the temple's sanitarium was open to the general public. Regular citizens frequently visited the complex in order to benefit from its healing capabilities. Ailing individuals could receive medical treatment from skilled priests, and they additionally sought treatment from the gods who were worshipped at the temple (Bleiberg et al. 2005b). Although elites could receive personal medical attention at their homes, the citizens received equally attentive care at these temple complexes. Thus, the temples' medical services worked to ameliorate the rampant inequalities which pervaded Egyptian society. In order to keep these services running and to remain in the gods' good graces, citizens may have felt obligated to give bountiful gifts which contributed to the temple's size as well as its social and economic influence.

Architecture and Religious Significance of Chinese Buddhist Temples

The architectural style of the Buddhist temple compound in China was largely informed by structures of Indian Buddhist temples. There are two main parts to a Buddhist temple as they were first constructed in India, consisting of a stupa and *vihāra* (Steinhardt 2005). These two elements were adapted to fit within the Chinese architectural style (Steinhardt 2005). Standing out among the one-story buildings typical of the area, the pagoda was a tower-like structure that was the Chinese version of the stupa (Steinhardt 2005). Originally a circular pillar with an egg-shaped dome on top in India, the stupa had transformed into a taller, multi-story four-sided monument in China (Steinhardt 2005). Some pagodas had seven to nine stories with “each side of each story ha[ving] three doors and six windows and was supported by ten pillars” (Steinhardt 2003, 549). Beautifully decorated with golden bells hanging from every corner and doorways secured with golden nails, the pagoda stood out among the landscape (Steinhardt 2003). It was more than a contrast in the landscape; the pagodas were primarily used to house sacred relics or mark a religious spot in history (Steinhardt 2003). Often scenes were carved on its exterior to be used during worship, and since it was believed to be sacred, no one could enter (Steinhardt 2005). Following a north-south axis that symbolized importance, the Buddha hall fell directly in line behind the shadow of the pagoda (Steinhardt 2005). The Buddha hall was a rectangular building of one story that was a place of worship for the community and contained the statues of the Buddhas (Iron 2010). Entrance into the Buddha hall was guarded with a rectangular wall to protect the Buddhas and worshippers from evil spirits that traveled in a straight line (Steinhardt 2005). Emphasis on the horizontal of a building was important to the Chinese at the time, and often buildings were never over one-story (Iron 2010).

Both the Buddha hall and pagoda were the main components of any Buddhist temple compound in China and were normally surrounded by a two-story mud-brick wall with an entryway (Steinhardt 2003). Larger compounds contained groups of courtyard- enclosed spaces in which lecture halls, pavilions, and monks' quarters were built on the less important east-west axis and represented the Chinese variation of the *vihāra* (Steinhardt 2005). All the buildings were constructed of wood that was painted in a certain color to distinguish the building's role (Mai 2012). In the case of the Buddhist compound, walls were painted red because they were religious and were typically roofed with glazed ceramic tiles of green and blue (Mai 2012). Looking similar to the palace complexes of the time, however, the only thing that distinguished the area as a Buddhist temple compound was the pagoda that struck out above the low gated wall (Steinhardt 2005).

Buddhist Temples' Societal Influence

Buddhist emphases upon the possibilities of rebirth and salvation attracted citizens from all social classes, even when the institutional presence of the temples and monks was small (Teiser 2005). Non-traditional rulers, such as female emperors or those who were ethnic minorities, who were often marginalized, were attracted to Buddhism due to its emphasis upon divine kingship (Teiser 2005). Supporting Buddhism allowed these non-traditional rulers to take advantage of the ideal of the *cakravarti-rāja* or "wheel-turning king," which allows aspiring rulers to achieve dominion over the entire world if they support dharma (Teiser 2005). Many emperors even followed the ceremony to become a lay Buddhist and built temples to honor their parents (Teiser 2005).

Not all rulers felt so inclined towards Buddhist temples. Because the temples and its community of monks were dependent upon donations for support, by virtue, the temples were considered large-scale social organizations (Teiser 2005). In China, at the time, the state had the right to “encourage, limit, or destroy any social institution outside the family whose membership attracted significant numbers or whose organizers even hinted at rebellion” (Teiser 2005, 1162). Buddhist temples were then placed under the control of different branches of government (Teiser 2005). With the emperor and state in charge of the temples, they could simultaneously offer support, exercise power, and take advantage of the popularity of Buddhism through licensing the institutions and practices (Teiser 2005). The state often limited the number of monks who were allowed to practice, how these monks were to practice, and what could be rightfully included in the Buddhist canon; the state also established temples to distribute this canon throughout the empire (Teiser 2005). Depending how the emperor of the time felt towards Buddhist temples, the government might have redistributed temple landholdings, melted down statues, banned the religious organization and even put temple leaders to death (Teiser 2005). Temples were invariably a site of worship in Chinese society, but they were also symbols of power which were manipulated during dynastic changes.

Comparison of Roles

The rather different architectural styles of these two kinds of temples greatly influenced their impacts upon parishioners. Egyptian temples of the New Kingdom were developed in order to make visitors feel as if they were stepping into an earthly dwelling of powerful gods, very much removed from the general society. As previously mentioned, Egyptian architects manipulated the

stark contrast between light and dark in order to produce a visual impact upon a visitor as he walked physically closer to the physical representation of a god. This transition could serve to make the parishioner or priest feel that there was a major difference between earthly and divine worlds.

This sharply defined contrast is not present in the Buddhist temples of China. Instead, the Chinese Buddhist belief system, and the ways that this informed the construction of the compound, emphasized the importance of a harmonious, comfortable space for worship (Steinhardt 2005). The stone that was used to construct New Kingdom temples could make visitors feel removed from the gods, as the formidability of the construction material seemed to forbid unwanted penetration. However, contrasting the stone were brightly colored wooden structures that could be interpreted as warm, joyous, and inviting to those who were allowed to worship in the temple. Buddhist compounds were placed in a landscape of magnificent mountains and forests, which served to emphasize Buddhist beliefs of the integrated nature of heaven, humanity, and the natural world (Iron 2010). Thus, while Buddhist temples played an assimilating role, as they brought Buddhists together in order to worship and learn, the New Kingdom temples of Egypt remained highly exclusive, generally accessible to societal elites alone. The divergent styles and placements of these structures reflected the role that the temple possessed within society, and how worshippers of different social and economic strata related to the temple as well as to the spiritual realm more broadly.

Although Buddhist temples held a place within the Chinese society, New Kingdom temples took a role in the framework of the social and economic spheres of Egypt. Funding by the emperor was often the only way for the Buddhist temples to be constructed and therefore was

used as a symbol of the architectural power of a dynasty (Steinhardt 2005). Each new dynasty had their own twist on the architecture and running of the Buddhist temples and either supported or threw to the wayside the temple compounds (Steinhardt 2005). The constant changing of the architecture and prominence of the religion in society marked the Buddhist temples' role as a symbol of changing dynastic rule in conjunction with a religious center within society.

Each new pharaoh within the New Kingdom, however, did not change the structure of the temples. Instead, pharaohs showed their wealth by adding a new level of grandeur to the place with a new pylon. Although the pharaoh was the closest connection to the gods, the priest of the New Kingdom held an important role within the temples that separated them as a more elite class than the general population (Bleiberg 2002). This new priestly class was added to the hierarchy of Egyptian society, giving its members exclusive access to the knowledge being taught within the compound as well as access to the gods that created a sharp contrast to the lower classes (Bleiberg et al. 2005a). Although monks of Buddhist temples took on a similar religious role as these priests, they did not form their own class and through the right processes a layman could become a monk (Steinhardt 2005). The temples in the New Kingdom, however, were still kept as something very unattainable to the common person even in worship, and with gods being such a center of life in Egyptian societies, temples became a powerhouse of status and control within society. And unlike Buddhist temples in China receiving aid only from the emperor, Egyptian temples received a wealth of resources in donation as well as harvesting its own resources from the estates of the compound serving to mark its place in the economic world (Bleiberg 2002). Without the temple, there would have been a large decrease in jobs for the surrounding area that could have set the people into poverty. The effect of closing a Buddhist temple would have not

had this same impact because the complex was only run by monks and many dynasties often closed the temples throughout the early history (Steinhardt 2003). Its separation as something elite and the resources both physical and spiritual it held, defined the New Kingdom temples as a center part of the society and its economy.

Conclusion

Ideological views inspired the variation in architecture of the temples in New Kingdom Egypt as well as Buddhist temples in China and their role as religious beacons, however, the temples of the New Kingdom took on an additional role within the larger social and economic spheres of Egypt. Buddhism quickly spread throughout China and played its part in creating a basis for the construction of temple compounds. The adaptation of this basic plan by various dynasties over the years led to the wooden architectural style of the Buddhist temples that was uniquely Chinese. As Buddhism became the prominent religion, these temple compounds served their purpose as centers of worship for the people of the region as well as sanctuaries for the monks. Although New Kingdom temples also took their place as religious centers, access to the temples were limited and thus created a new class division of priests. With elites and the pharaoh gifting immense resources to the temple and the importance placed on religion in the culture, the temples of the New Kingdom flourished into economic and social powerhouses.

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Aspirational States: Constructing and Disrupting Futures through Tamil Insurgency

Alexandra Newton, University of Michigan

Introduction

Anthropological research typically concerns itself with the present, or the extent to which the past haunts present actions and experiences. Anthropologists also write about the future, regarding the ways in which visions of the post-present are imbued with utopian hope (Miyazaki 2004; Pedersen 2012), imminent threats (Masco 2014) and calculated predictions (Guyer 2007). Less frequently grappled with are the actions pursued by individuals who possess an alternative, radical vision of the future, in which the world might be otherwise. These visions do not solely rest upon dreams or prophecies, but rather, they are enacted through various attempts to mold the future in one's desired image.

The aspiration to "future-make" played a central role in the 26-year long Sri Lankan Civil War, in which the LTTE (Liberation Tigers of Tamil Eelam) became notorious for its use of suicide bombings, high-profile assassinations and female and child soldiers. Through these controversial means, the thousands of insurgents who fought the Sri Lankan state did so in an effort to construct an alternative future for their ethnic kin. The LTTE was founded with the intention of establishing an independent state for the ethnic Tamil minority in a majority Sinhalese Sri Lanka. In this context, then, ideas and experiences of the state are bound up with imaginary, collective futures. In this paper, I will argue that central to the LTTE's nation-building project was the construction of a transnational Tamil identity, in which Tamils who participated in the insurgency could come to understand themselves as actors within a collective effort to reform the future. Looking both to the techniques through which the LTTE governed its

territories, and to the modes by which the LTTE became involved with the Tamil diaspora, I show how the Tamil insurgency operated upon certain modes of collective imagining and remembrance.

The Politics of Identity in Post-Colonial Sri Lanka

Sri Lanka's independence from British colonial rule did not materialize from mass agitation. Rather, independence was achieved as a result of the general decolonization of South Asia since the nationalist struggle in India (Roger, et.al. 1998). British colonial rulers established in Sri Lanka an approximate and incomplete system of indirect rule, in which the minority Tamil population was disproportionately involved in many segments of the colonial bureaucratic framework (Mampilly 2011:97). For the majority Sinhala population, the post-independence period was an opportunity to reestablish dominance over minority communities. Politically, the post-independence period was marked by an effort on behalf of Sinhala Buddhists to cultivate a sort of vernacular populism, which would appeal to the ordinary Sinhalese in a "language they understood." According to Spencer, this language was one of linguistic and religious identity, "laced with experiments in xenophobia directed at different minorities" (2008). Due to the polarized geographic distribution of ethnic groups, and the emergence of strong ethno-political divisions, political parties were rarely compelled to reach out to other ethnic populations, resulting in a political system that favored the majority Sinhala population without giving any protections to minority groups (Rogers, et.al. 1998).

The Sinhala Only Act of 1956 established the Sinhala language as the Sri Lankan national language with no mention of Tamil (Mampilly 2011:97). The act had its intended effect; in 1955

the Sri Lankan civil service had been largely Tamil, but by 1970 it was almost entirely comprised of Sinhalese, as thousands of Tamils resigned due to lack of fluency in Sinhala (Tambiah 1986). The Jayewardene administration, under which the civil war began, attempted to infuse Buddhist culture into mainstream political symbolism, by incorporating Buddhist monks, for example, at the opening celebrations for a paddy field, or the construction of a new dam (Spencer 2008). This necessarily marginalized, alienated and offended Tamils, who are predominantly Hindus, but also Muslims and Christians.

This conflation of Sinhala and Sri Lankan identity necessarily provided the grounds for which Tamils might construct an alternative identity politics for themselves. One of the early attempts on behalf of Sinhala parties to prevent against a Tamil bloc vote in parliament was to repatriate, or to deny citizenship to, most of the Indian Tamils who had been shipped to Sri Lanka during the colonial period in order to labor on tea plantations on the island (Mampilly 2011:99). This, however, had the consequence of reifying a transnational Tamil identity, as indigenous Tamil politicians began to embrace their Indian ethnic kin (Mampilly 2011:99).

During the same year of the Sinhala Only Act, 1956, the Tamil-operated Federal Party emerged, which promoted a federalist system that would grant the north and east of the country—predominantly Tamil—a relatively autonomous “Tamil homeland” (Roger, et.al. 1998). Because of the aforementioned geographical distribution of ethnic groups, Tamil political parties up to this point were stationed on the Jaffna Peninsula. Though parties attempted to address the grievances of the local population, however, they did not receive much respect in the national political arena. By the mid-1970s, a new, more hard-line Tamil-oriented party materialized, the Tamil United Liberation Front, who called for an independent Tamil nation (Rogers, et.al.1998).

While TULF represented the coalescence of an elite Tamil response to Sri Lanka's Sinhalese-Buddhist nationalism, younger Tamils from rural and less economically prosperous backgrounds began to articulate a more aggressive nationalism, and called for a violent response to Sinhala oppression (Mampilly 2011:104).

Tamil-ness

Vellupillai Prabhakaran, an eighteen-year-old from a rural Tamil family, founded the LTTE in 1976, in response to the evident failure of Tamil political parties to resolve ongoing state discrimination. In 1983, the LTTE killed thirteen Sri Lankan soldiers, prompting widespread violence against Tamils by the Sinhalese, who blamed them for the group's murders. Thousands of Tamils were killed in the ensuing riots, while the government and police ceased to intervene. With thousands dead and hundreds of thousands displaced, the Tamils lost faith in the Sri Lankan state (Thiranagama 2009: 133). The 1983 riots marked a shift in Tamil political consciousness, in which a "feeling of besieged Tamil-ness" was felt across caste and class divisions, and solidified support and recruitment for a newly emergent Tamil militancy (Thiranagama 2009:133). The construction of a narrative of collective suffering has proven galvanizing in many insurgencies (Hale 1994; Aretxaga 1997). In the case of the LTTE, I am interested in the ways that collective suffering, and the Tamil-ness in which this results, is essentially temporal, in that the establishment of a certain telling of history, and the present perceived threat by the Sri Lankan state, inspires ideas about what kinds of futures lie ahead for the Tamil people.

The 1983 riots provided the grounds for which individuals could begin to imagine themselves as a part of a larger body of Tamils because it integrated narratives of personal and

collective suffering. As Thiranagama (2009) reminds us, for each individual killed, or each family displaced, by the riots, many lives are personally and irrevocably transformed. This violence was felt by virtually all Tamils, and thus individuals could translate their personal loss and suffering into a collective cause by joining militant groups. A young woman whose parents were killed in the riots, and who was subsequently displaced to Jaffna and joined a Tamil militant group, presents her decision to join the group as an “identity” (Thiranagama 2009:134).

Thiranagama relays this woman’s thoughts as she describes, “Malathi emerged with a new sensation of what it meant to be Tamil, and she tells me that she filled loss and liminality with a feeling of society, collectivity and growing political awareness” (Thiranagama 2009:135).

Elsewhere, Malathi describes her political awareness as bringing her into “the world” (Thiranagama 2009:135). That a “world” was made possible by the violence of 1983 suggests not that Tamils were suddenly convinced by Marxist-Leninist ideology, which the LTTE roughly espoused, but that collective and personal devastation led Tamils to imagine a host of possibilities in which their future might be otherwise. The LTTE, for many, was simply the avenue through which this “world” seemed the most possible.

Legitimizing an Imagined State

At the height of the LTTE’s operations, the insurgent group was in control of about 76% of the land mass of the Northern and Eastern provinces of Sri Lanka (“Humanitarian Operation Timeline”). As the goal of the insurgency was to establish an autonomous nation for the Tamil people, the strategies of governance adopted by the LTTE, and the ways that those inhabiting these territories experienced this liminal state-to-be, become crucial. Following Abrams

(1988:71), states—whether real, imagined or in-the-making—should be analyzed not only as a material object but as an *idea*. The state is not only the center through which governing institutions, systems and practices emerge, but it is also a symbolic center of authority and a site of social cohesion. How the LTTE constructs both a state apparatus and the far more illusory affect of stateness, is of central consideration here.

When the LTTE initially came to control territory in the mid-1980s, its first priority was the establishment of a force capable of policing the population (Mampilly 2011:116). A police academy was created that trained up to three hundred cadets a year, and the police enjoyed a good deal of legitimacy from the public, viewed as uncorrupt and a vital stabilizing element in the territories (Mampilly 2011:116). Coordinated from its headquarters in Kilinochchi, local police are assigned duties that mirror many other police forces, such as preventing and detecting crime, regulating traffic and disseminating information about crime prevention to the civilian population (Stokke 2007). Certain welfare regimes have been established in the controlled-territories, however most services are provided either by transnational NGO's, or by the Sri Lankan government itself (Stokke 2007). However, as Stokke (2007) remarks, the LTTE state formation rests on “hegemony protected by the armor of coercion.” This suggests that a strong welfare system is not in fact of high priority for the LTTE, as its state power is largely reliant upon its ability to apply force and maintain external and internal security. While this *de facto* state is ostensibly devoted to the rights and development of the Tamil people, the forms of governance and political institutions that were established convey authoritarian and technocratic tendencies that value efficiency and security over democracy.

Having established a rough framework of the LTTE's governance institutions and systems, I now seek to turn to the ways that the LTTE conveyed and produced a feeling of state-ness amongst the populations under its control. That is, I turn to the ways in which affective and material embodiment of a Tamil state-in-the-making was generated by the LTTE in the groups' far-reaching occupied territories. Though legal and educational systems do assist in producing affective relationships with the state, institutional provisions alone cannot account for what legitimates the Tamil Eelam from the perspective of their controlled populations. The LTTE displayed dominance over its territories by fashioning public spaces as displays of symbolic expressions of Tamil nationhood. Indeed, Tamil unity was constantly affirmed by its material embodiment in Tiger flags fluttering in the wind, uniformed police officers, posters commemorating fallen Tamils, newsletters advertising public campaigns on social issues, and elaborate war memorials (Mampilly 2011:112). I will now focus upon how these war memorials are an integral component of the LTTE's nation-building project, as they become one of the first sites of national memory for a future Tamil Eelam.

When constructing a national history, nations must take into consideration the innumerable deaths from the assassinations, wars, executions and so on that occurred up to the present moment (Anderson 1983:206). To serve a nation's purpose, violent deaths must be remembered as "our own" (Anderson 1983:206). For the LTTE's state-in-the-making, finding a way to memorialize the many deaths of honorable Tigers was vital. Thus, in a nation-building project such as this, by fashioning a future, one must always be concerned with the present as if it were the past. Nation-building therefore becomes an inherently temporal endeavor, but this

temporality is far from linear, instead vacillating between past, present, present-as-past, and future.

Approximately 17,000 Tamil Tigers have died over the course of the Sri Lankan Civil War, leaving behind the physical evidence of protracted collective violence (Natali 2008). Until the beginning of the 1990s, the bodies of deceased LTTE fighters were cremated and the ashes given to the parents of the deceased, according to Hindu principles. While Hinduism is the most popular religion amongst Sri Lankan Tamils, Christians and Muslims, who bury their dead, are present as well (Natali 2008). Mr. Pontyagam, a member of the LTTE leadership, justified the switch from cremation to the burial of dead soldiers by noting the refusal of Christians and Muslims to accept the ashes of their dead children. He explains that the LTTE researched what other countries like the United States and England did for their soldiers, and upon discovering that the traditional practice was burial, “they decided to proceed in the same way” (Natali 2008). However, these cemeteries also serve as crucial sites of remembrance for the martyrs of the Tamil separatist struggle. As a civilian explained, “When our children ask [about Tamil Eelam]... we reply: ‘Here there are the people who sacrificed their life for the freedom of Tamil Eelam’” (Natali 2008). For these citizens-to-be, cemeteries emerge as crucial because they are enduring physical forms that memorialize both the pain and suffering, and the honor and pride, of the Tamil armed struggle. As the material embodiment of a people willing “to die for such limited imaginings” (Anderson 1983:7) of the nation, these cemeteries allows Tamils to claim the deaths of LTTE as “our own.”

These “Sleeping Houses” produce an affect of national belonging because they are something not only to be remembered, but a physical space around which ritual can be

performed. November 27th is *Maaveerar Day* (Heroes Day), officially remembered as the day the first Tiger, Shankar, was killed (Natali 2008). Tamils who live outside of Sri Lanka commemorate this day by organizing celebrations in public places, such as theaters and public halls (Natali 2008). Tamils in Sri Lanka, however, gather at these cemeteries with flowers, incense and candles in hand (Natali 2008). *Maaveerar Day* is also when Prabhakaran delivered his annual speeches, broadcast through loudspeakers in all LTTE cemeteries in the controlled territories. I posit that *Maaveerar Day*, both for Sri Lankan Tamils and for the Tamil diaspora, functions as a way to reify the imagined qualities of this budding nation (Anderson 1983:6). The knowledge that all Tamils are partaking in this annual memorial, and that those in Sri Lanka hear the same voice and the same words through the loudspeakers, are crucial ways in which widespread Tamil-ness is felt. More importantly, this ritual also fosters legitimacy for the LTTE, as the body through which this imagined community will be, in the future, recognized as a state.

There is a decided dual quality of the ethnic group, as the conceptual extension of the family. While trust and solidarity are often evoked in the context of ethnic identity, these attributes make possible betrayal and duplicity. Closeness breeds deception. This may be why, during Prabhakaran's annual speech on *Maaveerar Day* in 2005, he proclaimed: "The traitor is more dishonorable than the enemy" (Thiranagama 2010:127). In this, Prabhakaran makes the distinction between the Sinhalese, as external enemies, and those Tamils who, in one way or another, betray the Tamil cause. These are the two fronts upon which the LTTE was fighting. Though violent Sinhalese populations within the territories caused problems for the LTTE, more dangerous were ordinary Tamils, who could be quietly disseminating secrets to government officials, or criticizing the LTTE amongst friends and family.

To understand the LTTE's precise strand of nationalism, particularly in its liminal, state-in-the-making position, I argue that we must analyze the category of the traitor and the ways in which this category of person was managed. Treason became a broad legal category under which various crimes were subsumed, and the practice of detaining traitors was ordinary and widespread (Thiranagama 2010:133). Thiranagama notes that the kind of nation-building project that was undertaken by the LTTE was one in which both a territory and a people were to be created at the same time, and therefore the LTTE was particularly vulnerable to disunity (2010:136). Evidently from Prabhakaran's speech, traitors were not a secret, but an integral part of political theatre, in which contempt for and punishment of traitors were to be made public and commonplace. The anxiety and, in some ways, the mania surrounding the "traitor" had the effect of portraying the state as fragile and less self-evident, and therefore, constant vigilance was needed (Thiranagama 2010:137). Though traitors were a legitimate threat to the LTTE and to their incipient nation, they were also instrumentalized as a way to legitimate heightened security measures and totalitarian practices.

The category of the traitor also informed particular ideas about the self. Because the LTTE governed Tamils as if they were all potential traitors, the traitor was not the "other," but a potential self that needed to be guarded against (Thiranagama 2010:138). Both within the civilian population as well as the ranks of the LTTE, individuals policed their own behavior, as everyday life with others was increasingly governed with suspicion and precarity. While, within the ranks, "if you inform on someone else then you get a promotion," civilians became worried that personal disputes around land and family might result in one side going to the LTTE (Thiranagama 2010:139). The destabilization of trust and intimacy among Tamils was,

paradoxically, quite the opposite of the warm feelings of ethnic solidarity that are often advertised and proclaimed by insurgent groups. This rupture allowed for the LTTE to insert itself into social life, as loyalties were reoriented away from each other and toward the LTTE (Thiranagama 2010:140). Individuals were compelled to constantly perform their explicit obedience and allegiance to the LTTE, for fear that lack of action might incite suspicion.

In light of this analysis, the attendance of war memorials on *Maarveerar Day* become all the more compelling. An informant of Thiranagama's says, regarding this: "Ordinary people... they feel guilty that they have not died and they worship... Finally they go because they want to show that they are not traitors" (Thiranagama 2010:139). Natali's (2008) description of *Maarveerar Day* remains uncritical to the ways in which performed worship and fidelity are sometimes coerced actions. Thiranagama (2010) and her informant provide a far more nuanced account of the motivations of individuals to demonstrate allegiance to the state-in-the-making. Of course, *Maarveerar Day* is not entirely a charade. Individuals do attend the memorials to honor those Tamils who have fallen, and members of the diaspora, who are far less susceptible to the coercion of the LTTE than those in the controlled territories, also participate in this celebration.

The reasons that Tamils attend these memorials, then, are often oppositional and contradictory. The sheer amount of violence that has been committed over the course of the Sri Lankan Civil War is worthy of mourning in and of itself. There is also the sense that, though many personally opposed the tactics of the LTTE, the Tamil struggle remained valid, honorable and necessary (Thiranagama 2009). And of course, many feared retaliation from the LTTE if they did not attend the memorial and perform their roles as proper "citizens." I suggest that a

combination of these motivations, and most likely several others, are more accurate descriptors of individual choice than any simple, discrete explanation. Individuals, then, often took up complex relationships with the LTTE as well as with each other and themselves. The LTTE was not only undergoing a nation-building project, but subjects were being re-constituted as all sorts of associations, from kin to the state, were transformed.

Aspirations of a Diaspora in Waiting

The destruction and violence of the conflict has produced a Sri Lankan Tamil diaspora of over 700,000, many of whom have settled in North America, Europe and Australia (Mampilly 2011:104). This diaspora often harbors resentment toward the mistreatment and suffering enduring in their home country, and many individuals remain deeply invested in the LTTE struggle. Tamils across the world have managed to become quite active in their support of the insurgency, contributing up to 80% of the LTTE's annual funds (Faire 2006). Indeed, from its inception, the LTTE operated on a global scale. In the insurgency's earliest incarnations, the group received substantial training, equipment and capital from the Government of India, in particular from the state of Tamil Nadu, which is majority Tamil (Mampilly 2011:104). Though this became untenable for political reasons in India after 1987, the LTTE has retained a strong network of supporters in much of the world, particularly in the West and parts of Southeast Asia.

The concept of diaspora is intrinsically spatial, in that distances are formed between people and "home," while new spaces of belonging must be created in these new resident communities. However, I posit that we must consider the ways in which individuals in the Tamil diaspora embody and operate upon the temporal aspects of their position as well. That is, we

must think about the diaspora's involvement with the LTTE as related to a hope that, at some point in the future, Tamils might be able to "return home" to a Tamil Eelam. We might also consider the ways in which the LTTE embeds itself into diaspora communities in order to fashion certain kinds of Tamil subjects, just as Tamil-ness is constructed within Sri Lanka.

Tamil migrant communities are often relatively excluded from the broader city in which they are situated. Most migrants do not know the language of their new country, they often occupy dilapidated public housing, and are employed as security guards, cab drivers and so on. Thus, Tamils form their own small communities in their new countries, often colloquially called "Little Jaffna," a city in Sri Lanka that was particularly devastated by the war (Thiranagama 2014). In these marginalized communities, comprised of individuals with recent and complicated experiences of war, the LTTE was able to become a cultural background, as opposed to the political organization it was in Sri Lanka (Thiranagama 2014). Tamil grocery stores place pictures of Prabhakaran next to Hindu gods, and LTTE flags and calendars abound.

The LTTE embedded itself into the social and civic structures of everyday Tamil diaspora life. By teaching classes to youth about Tamil culture, and providing social services such as legal advice and assistance with housing applications (Thiranagama 2014), the LTTE positioned itself as a savior that at once assisted the exiled Tamils, while also reminding them of their secondary status in their new countries. Young people, in particular, embraced the LTTE, for its use of heavy imagery and the sense that the organization would avenge the wrongs against a once great Tamil people.

However, the diaspora's engagement with the LTTE was riddled with contradictions. The LTTE distributed Tamil poetry to youth, however because most young people could not speak

Tamil, the meanings of the poems were lost on the young readers (Thiranagama 2014). Parents, too, exhibited contradictory sentiments toward the LTTE. Parents lamented their children's engagement with gang violence, but encouraged them to attend LTTE rallies, in which violence and the militarization of young people was proposed as the only solution to anti-Tamil discrimination (Thiranagama 2014). Because the LTTE provided a social space in which the Tamil community could unite, the LTTE became strangely de-politicized. Attending LTTE rallies became less about an ethno-political struggle than it had become part and parcel of Tamil identity abroad.

One of the most successful aspects of LTTE mobilization of diaspora communities was the acquisition of millions of dollars in "donations" from the migrant population. There are both overt and implicit forms of coercion used in order to extract money from populations who, often, have little to give. The LTTE frequently acts as a "proxy lender" who provides an initial loan for a Tamil starting a small business, and subsequent profits are split between the LTTE and the owner (Faire 2006). The LTTE also used techniques such as "door-stepping," as they arrived at a Tamil family's door step and demand money while threatening the safety of family members still in Sri Lanka (Thiranagama 2014). However, there are also cases in which privileged Tamils give generously of their own volition; a California-based physician has donated as much as \$100,000 at a time, and is revered as a "god" by the LTTE because he gives whatever is requested (Faire 2006). Of course, there is not one way in which the LTTE was interpreted by the diaspora. While some members have been outspoken for their demand for a non-violent alternative to the LTTE, others remain steadfast supporters of the insurgency (Orjuela 2008). It is also true that, though the LTTE exerted force, or the threat of force, when necessary outside of Sri Lanka, the diaspora

experienced an entirely different LTTE than the highly centralized military occupation in parts of Sri Lanka. The LTTE occupied diaspora communities in such a way that even though individuals might not completely subscribe to Tiger ideology, the social services and cultural community that was fostered by the LTTE made the organization tolerable, if not favorable and treasured.

Though “donating” to the LTTE for many was a choiceless decision (Aretxaga 1997), I argue that contributing to the LTTE, either monetarily or otherwise, was another way in which a Tamil identity was formed. The mass exodus of Tamils as a result of the civil war has necessarily produced a large group of individuals in effective exile. Alongside the LTTE’s nation-building project in Sri Lanka, there was a dispersion of Tamils across the world, often marginalized and stigmatized in their new countries (Anderson 1994). For the diaspora, the prospect of involving oneself in a movement to “return home,” but to return to a better, more liberating home, was often irresistible. Of course, this home was imagined both in the sense that it did not yet exist, but also in that many of the younger members of the diaspora had never lived in Sri Lanka. As Anderson notes, “The Tigers in Jaffna are stiffened in their violent struggles by Tamil communities in Toronto, London and elsewhere all linked on the computer by Tamilnet” (1994:327). Thus, the privileged status of the diaspora enables the Tamil to “play, in a flash, on the other side of the planet, national hero” (Anderson 1994:327). The LTTE’s presence allowed for the imagined possibility that, unlike most diasporas, the Tamil diaspora could be reversed. By constructing a past through “educating” Tamils about their culture and fraught history, the LTTE inadvertently constructed imaginings of the future.

Conclusion

The Sri Lankan Civil War ended in May 2009, as the Sri Lankan military pushed the LTTE from its strongholds. To cover its retreat, the LTTE forced 330,000 people to march with them, placing civilians under constant aerial bombardment from the Sri Lankan army. The state bombed hospitals and areas previously declared no-fire zones, all of the while mounting a “humanitarian rescue” of Tamils from the LTTE (Thiranagama 2013). In the final four months of the war, 40,000 Tamil civilians died, leading Sir John Holmes, UN Under-Secretary-General for Humanitarian Affairs and emergency relief coordinator, to deem the situation a “bloodbath on the beaches of northern Sri Lanka” (Holmes 2009). After the war was officially over, 285,000 Tamils were interned by the state in mass camps and kept there for nearly a year. Thousands of Tamils also disappeared from the camps, and their whereabouts remain unknown (Thiranagama 2013).

Since May 2009, the dream of a Tamil Eelam has more or less subsided. We must consider, then, what happens when collective aspirations for the future become memories of a former yearning. Despite the atrocities and totalitarian measures taken by the LTTE, the organization did provide the hope of an alternative future to Tamils; post-2009, the Tamils have no legitimate alternatives or choices. They must instead deal solely with the Sri Lankan government, who, even after this 26-year long civil war, proposed that the country could only resolve the aftermath of the conflict through “Buddhist principles” (Chamberlain, Weaver 2009), the religion of the Sinhalese, as opposed to Hinduism, Islam or Christianity, the religions of Tamil-speaking communities. Though the Sri Lankan government has positioned itself as the savior of the Tamil people, the alleged human rights violations on both sides of the conflict refute these claims of emancipation.

Indeed, post-war reconstruction in Sri Lanka begs the question of when the “past” can truly become the “past” (Thiranagama 2013). The Lessons Learned and Reconciliation Commission, instituted in May 2010, is largely understood as a flimsy government attempt to assuage international demands for a review of the war. The testimonies on behalf of Tamils and Muslims, largely in the north of the country, elucidate the ways in which many individuals still bear the consequences of the war. The most frequent complaints consisted of missing family, lack of aid provisions in refugee camps, intimidation by Sri Lankan security forces and restrictions to livelihood due to military occupations of coastlines (Thiranagama 2013). Evidently, these grievances were not concerned so much with a distant past, but with ongoing postwar issues concerning police, military and state bureaucracy (Thiranagama 2013). Just as previous reconciliation commissions have explicitly or implicitly excluded certain members of the population from testifying (Coulter 2009), many individuals were simply turned away when they showed up to testify before the LLRC in Sri Lanka. Though the final report from the LLRC deemed that Tamils had “serious grievances” and that the state was obligated to address these, the sections of the report dealing with government and army accountability were highly uncritical, claiming all state violence was warranted given the threat of the LTTE (Thiranagama 2013).

It seems that the Sri Lankan government has chosen neither to grant autonomy to Tamil areas, nor to genuinely follow the reconciliation process. Sri Lanka instead chooses to remember the LTTE and its war zones through Sinhala nationalist terms. The state has transformed many former war zones on the island into museums and tourist attractions, and has destroyed many of the LTTE’s “Sleeping Houses” (Hyndman and Amarsingam 2014; Mampilly 2011:105). This

mode of remembering the country's past situates the LTTE not as a blemish on the country's history, or as an opportunity to learn from past mistakes, but as a future threat that legitimates continued state militarization. Indeed, the past lives on in Sri Lanka as the significant militarization of the country has not subsided with the end of the war, nor has the marginalization of minorities been ameliorated (Harris 2015).

Of course, all national histories are guilty of selective remembrance. But the ways in which nations choose to remember has significant bearing on their futures. The Sinhala, Tamils and Muslims of Sri Lanka have neither forgiven nor forgotten (Coulter 2009:180), and while the war is continually put at a distance in time, the Sri Lankan Civil War and its afterlives continue to haunt Sri Lankan communities. Since 2009, the Sri Lankan state has attempted to legitimate its own version of recent history, but Tamil networks within and far from Sri Lanka continue to operate (Ramakrishnan 2015), in an aspiration to re-make the future once more.

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Implications of Personal Ornamentation Production in Human Evolution

Briana Gladhill, University of Michigan

Introduction

The evolution of modern behavior is a complex issue in evolutionary anthropology. These modern behaviors support our ability for the creation and sustainment of complex cultural systems. Symbolic behavior, which consists of the creation of art and personal ornamentation, the ability to create alternative worlds and to imagine, is an essential component of this suite of behaviors that facilitate our cultural tendency (Calcagno and Fuentes 2012). Proximate explanations for the pervasiveness of symbolic behavior in human populations speak to the ways in which symbolic behavior promotes long distance exchange, in-group cohesion, bounded cultural groups, and sharing; it can also reflect status markers and markers of individuality (Vanhaeren and d'Errico 2006). These proximate explanations do not account for the ultimate explanation of why certain behaviors evolve in the first place. The ultimate causation of symbolic behavior generally falls under the category of sexual selection (Low 1979; Miller 1999). However looking at the broader superordinate group of social selection provides a more inclusive explanation of the selective pressures that shaped the evolution of symbolic behavior.

Examples from modern day peoples and the ethnographic record provide evidence for the evolution of symbolic behavior; however demography and cultural variation in contemporary examples conflate these lines. Thus, it would be useful to extend the sample further back in time to analyze the potential causes of early symbolic behavior. Archaeologists define the creation of art, personal ornamentation, artifact style, and the social use of space as unambiguous evidence

for symbolic behavior in the archaeological record (Wadley 2001). Unfortunately, not all of these traits preserve and some prove to be ambiguous; for example, archaeologists can try to infer body painting and the creation of art from traces of pigments found, but these conclusions are merely conjecture. However, personal ornamentation, in the form of shell beads, provides evidence of symbolic behavior into antiquity.

In this paper, I will argue that social selection is a better ultimate explanation than sexual selection for the evolution of symbolic behavior. I will use archaeological and ethnographic evidence of personal ornamentation production, in the form of shell beads, to highlight the nuances of the evolutionary trajectory of symbolic behavior.

Theoretical Background

Many theoretical frameworks, which often interact with and inform one another, attempt to define the mechanisms behind the evolution of symbolic behavior. In this respect, they also work to identify why personal ornamentation, specifically, would have evolved. Here I will explore three theories in detail: cultural transmission theory, sexual selection theory, and social selection theory.

Cultural/social transmission is the transfer of non-genetic information from individual to individual, within communities and across generations, via social learning mechanisms (Mesoudi 2013). Evidence for social transmission in primates is extensive (see Humle and Newton-Fisher 2013), and suggests that the last common ancestor (LCA) of humans and the great apes also exhibited minimal social learning capacities (Lycett 2013). Cultural transmission works as an evolutionary process that rests on Darwinian principles of variation, differential fitness, and inheritance (Mesoudi 2013). Furthermore, cultural traits can influence the selective pressures that

shape biological patterns of reproduction and transmission forming a reciprocal relationship considered gene-culture co-evolution (Lycett 2013, 119). Genetic selection for social transmission is adaptive because it allows individuals to acquire adaptive behavior socially and behave flexibly during times of environmental variation. This interaction creates a feedback loop and cultural traits proliferate and change through time, affecting genetic evolution (and vice-versa) along the way (Lycett 2013). These and other stimuli shaped human behavior and social interactions throughout our evolution and influenced the development of a complex brain capable of handling complex, shifting, and unpredictable social environments. Thus, in this framework, personal ornamentation and other symbolic behaviors proliferate as socially acquired traits, whereas sexual selection predicts the proliferation of personal ornamentation as display signals of high quality reproductive capacity.

Sexual selection is a mode of natural selection where members of one sex either compete for the best mates or choose a member of the opposite sex (Trivers 1985). This can result in sexual dimorphism and the development of features or behaviors (e.g., size, plumage, mating calls, and behavioral displays) that increase mating success (Low 1979). These features display fitness and/ or quality of parental investment, and it is generally agreed that they are displayed in the sex whom competes (Trivers 1985). Two competing models define how sexual selection acts on personal ornamentation and symbolic behavior. Low (1979) predicts that personal ornamentation displays reproductive fitness and would be exhibited, in either sex, based on the social structure of the society (i.e. polygynous vs monogamous). Low's list of ornaments is more extensive than the type of ornamentation that I am examining (e.g. breast augmentation, make-up, etc.), and emphasizes sexual selection in contemporary human societies. Miller (1999), on

the other hand, focuses more broadly on cultural displays and posits that they function as sexually selected indicators of phenotypic and genetic quality. He contends that cultural displays function well for sexual selection because they are high-cost (Miller 1999). Costly signaling defines higher cost signals as more likely to be honest because they will be too expensive for imitators to fake; thus if cultural displays are high cost they will benefit the individual the most from increased reproductive success (Bleige Bird and Smith 2005). Low's (1979) hypothesis assumes that sexual displays would be more prominent in females, due to the nature of polygynous societies and the high degree of male parental investment usually seen in humans. Whereas Miller's (1999) cultural courtship model predicted that sexual displays would be more prevalent in males. Both models agreed that display behavior would peak during the years of peak fertility and be more prevalent in single individuals. These hypotheses highlight the importance of our unique cultural and behavioral flexibility, and suggest sexual selection is important in the development of these behaviors. However, these competing ideas of who displays in sexual selection highlight the nuances of this mode of selection, which suggests that it is not the best indicator of the forces underlying the evolution of symbolic behavior and personal ornamentation.

Like sexual selection, social selection is also dependent on the actions of other individuals, however, unlike sexual selection, during social selection both individuals benefit from choice and costly displays are used to maintain a social relationship. In social selection, an individual's fitness is not directly related to their ability to reproduce, but in how the decisions of other members of the community affect that individual's fitness (Nesse 2009). Social selection shaped vigilance about how others are judging you, which in turn promotes cooperation and in-

group identity. Social partners provide many fitness benefits to individuals and groups, such as the ability to obtain and share resources (Nesse 2009). Thus, it would be beneficial for individuals to display their skills and their tendencies toward generosity to attract social partners. Displays would enhance individual fitness and proliferate to a point where selection for displays “could enter a runaway cycle that shapes extreme human social traits not found in other species” (Nesse, 2009, 143). In this respect, symbolic behavior and personal ornamentation would have evolved as a response to increasing social pressure, and the traits that conferred the highest fitness benefits would succeed.

Ultimately, cultural transmission and sexual selection fall under the purview of social selection theory, and it is likely a combination of these factors working with an evolved or evolving brain that selected for the traits that resulted in the creation and utilization of personal ornamentation. In the next section, I will highlight the intricacies of personal ornamentation use in the past and present and emphasize the different lines of evidence for the selection of this trait.

Propagation of Personal Ornamentation

Until recently, archaeologists claimed the evolution of symbolic behavior occurred during the Aurignacian period (~47-41 kya) in Europe (Mellers and Stringer 1989). This view has changed due to new artifactual evidence, including shell beads (etc.), from cave sites in Southern and Northern Africa. The production of beads represents a behavior specific to humans, which functions to convey social information and project a symbolic meaning that can be interpreted by other individuals and groups (Vanhaeren, et al., 2013; d’Errico, et al., 2009). The earliest

examples of personal ornamentation are found sporadically throughout the archaeological record in Africa; marine shell beads, uncovered at the Skhūl site in Israel, were dated to between 135-100 kya and are generally accepted as the oldest evidence of personal ornamentation to date (d'Errico, et al. 2009). Further evidence from northern Africa and the Near East was found during the excavations of Qafzeh in Israel (~100-90 kya) and Taforalt (~85-82 kya), Rhafas cave (~80-70 kya), and Ifri n'Amman (~82 kya) in Morocco. Not only do these sites indicate the early behavioral capacity for bead production, they also provide evidence for important inferences on the types of selective pressures these bead producers faced.

The locations of these sites suggest that our ancestors utilized long-distance exchange in deep antiquity. Three of these sites are located ~40-50 km inland, and one site in Algeria (Oued Djebbana) is 190 km away from the coast; this represents an archaeological link between inland sites and the coast which could be indicative of long distance exchange, or at least long distance procurement strategies (d'Errico, et al. 2009). Long distance exchange is useful for risk management during times of resource scarcity; it represents cultural transmission through the social spread of information about how to create shell beads; and it also exemplifies social selection due to the ability to identify and create exchange partners through the use of culturally specific goods. Archaeological excavations in southern Africa also shed light on the early use of personal ornamentation.

Finds from the Blombos Cave site defied the traditional notions of the evolution of symbolic behavior, and highlight the potential selective pressures of personal ornamentation use. In addition to finds including engraved ochres and pigment processing tool kits, archaeologists also uncovered 70 marine shell beads dating to roughly 75 kya (some of the earliest known beads

recovered from an archaeological excavation). Vanhaeren, et al. (2013) conducted experimental reproduction on the use wear of these shell beads and found that the use wear and shell grouping length was consistent with being worn as bracelets, necklaces, head bands, etc. They also noted a change, through time, in the way the beads were strung. This change could represent a shift in the cultural groups who were using Blombos at this time; potentially signifying the need and desire for in group cohesion and boundaries between groups. Additionally, these beads appear to have been painted (Vanhaeren et al., 2013). In examining the potential symbolic capacity of the Blombos shell beads, Hodgson (2014, 62) found that shell beads, worn as body ornamentation, produce a signal capable of carrying social information, such as the nuances of group identity. Social selection could have shaped the tendency of individuals to create distinct ornamentation in order to accent their social identities. Furthermore, sexual selection would favor this distinction because it would hinder the possibility of inbreeding. Hunter-gatherer groups who used the Blombos beads socially could have benefitted from the advantages of having social partners and being able to differentiate between groups. These finds continue to influence the debate on the evolution of symbolic behavior, and evidence of personal ornamentation is not found again until roughly 40-50 kya, in Africa and the Near East, and for the first time, in Europe and Asia (d'Errico et. al., 2009; Vanhaeren et. al. 2013).

It would be useful to pause here and recognize some of the proximate factors that influence symbolic behavior. Studies suggest the importance of demographic, environmental, and social factors in the proliferation of symbolic behaviors (see Mackay et al. 2014). Climate is an influential factor in subsistence strategies, demography, and human evolution. Given the right circumstances the size, stability, and interconnectedness of past human populations would have

encouraged the development of novel behaviors and rates of culture change and diversity (Kuhn 2012). Using evidence of social transmission as seen through similarity and variation in lithic assemblages, Mackey et al. (2014) found that human groups experienced variable coalescence and fragmentation during the time spanning ~130-12 kya (the time period in which we see the earliest signs of personal ornamentation and subsequent proliferation). Furthermore, the coalescent periods correlate with times when personal ornamentation and other symbolic indicators become common in the archaeological record (Mackey et al. 2014). Clearly, increased social interaction effected human behavior and could indicate why personal ornamentation production is not consistent throughout the early development and use of this novel behavior. Proximate explanations, including demography, environmental responses, and the degree of social interconnectedness, intimate the ultimate cause of symbolic behavior in the form of personal ornamentation – social selection and cultural transmission. Sexual selection would have encouraged more consistent use of personal ornamentation if the use of ornamentation had greatly increased the reproductive success of competing individuals. The further development and expansion of our species out of Africa (likely due to climatic and demographic influences) encouraged a fruitful reprise in personal ornamentation production.

Part of the reason the Eurocentric vision of symbolic behavior endured is due to the plethora of evidence for it with the arrival of modern humans in Europe, and the unprecedented evidence for distinct cultural groups seen in these archaeological assemblages. Personal ornamentation alone is found at over 98 Aurignacian sites, encapsulating 157 distinct types (Vanhaeren and d’Errico, 2006). These types show immense behavioral variation through the use of distinct raw materials, such as shell, teeth, ivory, stone, bone, antler, and more, with further

variation in type and design within each category (Vanhaeren and d'Errico, 2006). Not only does this use of personal ornamentation reflect similar symbolic capabilities of *H. sapiens* in Europe as in Africa, Vanhaeren and d'Errico (2006) also found that regional variability in bead type reflects distinct cultural groups. Symbolic behavior flourished throughout the world after 50 kya, and as time went on, modern human populations increased, settlement organization and subsistence patterns changed, and so too did personal ornamentation styles and functions (Vanhaeren and d'Errico, 2006; d'Errico et. al, 2009). As the proliferation of ornamentation continued, indications of social selection still appear in the form of in-group cohesion and distinctions between groups.

More recent archaeological records give further insight into the possible utility of personal ornamentation. The Chumash on California's coast and the Channel Islands of California created a hierarchical system of exchange based on the use of marine shell beads (Neusius and Gross 2014). The olive snail is found on the coast lines of the Channel Islands, and pre-historic people there created beads from them with the use of chert micro-drills. While on the mainland coast, the Chumash processed mass quantities of mast (acorn and pine nuts) for consumption (Neusius and Gross 2014). The Channel Islanders did not have access to mast, and the Chumash did not have access to shell beads; thus, they formed an exchange relationship of shell beads for mast (Neusius and Gross 2014). This relationship elevated the status of the people who had access to chert for the production of micro-drills and those who had the ability to create a surplus of mast (Neusius and Gross 2014). These events allowed a certain few to create subsistence surpluses and obtain prestige goods, which drew in others from their communities who then formed the labor base; these Chumash beads became a symbol of status and power

(Neusius and Gross 2014). The Chumash exemplify runaway selection (as described by Nesse 2009); these beads conferred an enormous benefit to the people who created them (i.e. a predictable subsistence resource), thus creating a positive feedback loop which encouraged the extreme traits seen here. Bead production and use for the Chumash implicate the continued influence of social selection for the creation of partnerships between groups and complex social organization within groups.

Ethnographic records of the Kalahari Bushmen provide another example of the power of personal ornamentation. The !Kung bushmen of the Kalahari participate in reciprocal gift-giving exchanges. These exchanges follow certain cultural guidelines, such as one cannot refuse a gift and must return a gift of similar value, however there is no mandate on the timeliness of the return (Marshall 1961). Gift-giving deters jealousy and ill will, and supports the development of friendly relations between individuals and bands. Gift-giving, however, is not considered trade, and is mandated for betrothal, weddings, and a baby's first haircut (Marshall 1961). Additionally, the !Kung consider ostrich egg-shell beads the most highly valued gift (Marshall 1961). Ostrich egg-shell bead production is found in the archaeological record, especially in rock shelter sites, going back to at least 12 kya in southern Africa (Barham and Mitchell 2008). Some archaeologists use ethnographic evidence of Bushmen as an analogy for a long-term tradition of gift-giving. However, there is a lack of evidence from other Bushmen practices in the archaeological record (Barham and Mitchell 2008). !Kung gift-giving traditions also provide an analog for the selection of symbolic behaviors socially; gift-giving inherently displays one's generosity, especially if the gift is of high value (i.e. ostrich egg shell beads). This high value display functions not only to create individual social partners, but group level relationships, as

well. !Kung gift-giving and the evidence presented here, on shell bead production throughout time, highlights the importance of social interactions and relationships that support the development of these novel behaviors.

Concluding Remarks

This study highlights the importance of shell bead production throughout time and provides implications for why personal ornamentation developed and proliferated. Social selection encouraged prehistoric human groups to develop novel behaviors that supported social relationships, such as personal ornamentation. Individuals and groups could then utilize personal ornamentation in order to facilitate cooperation, risk management, in group cohesion, and boundaries between groups. These, in turn, buffered against the risk of inbreeding and created the possibility for sexual selection based on cultural displays of value. Cultural transmission ensured and affected the rate of transmission and the prevalence of production of shell beads as seen in the archaeological and modern records. The tendency of our ancestors for social learning, coupled with variable social and sexual pressures helped to create a runaway process that is seen most prevalently in our species; the antiquity and proliferation of personal ornamentation, while not all encompassing, helps to highlight one avenue for which our species was able to develop the cultural capacity that we see today. However, there were some limitations to this study, which provide directions for future research.

I chose to look at personal ornamentation in the form of shell beads, as a sign of symbolic behavior, due to its high prevalence in the archaeological record. However, there is an archaeological bias in terms of preservation that colors our understanding of past behavior. Furthermore, our inferences of human behavior, based on analogies with contemporary hunter-

gatherer groups, are inherently flawed due to the inconsistencies of the environments in which contemporary groups lived and the environments in which our ancestors evolved. Not to mention, bead production is also found in Neanderthal assemblages, and a study that addressed their behavior along with ours would provide more insights. Additionally, there are many different types of symbolic behavior and of personal ornamentation. This study does not address pigment use, for example, which could signify early body painting. Nor does it take into account the varieties of personal ornamentation that exist today, such as piercings and tattoos, or explicitly sexual indicators of reproductive capability (e.g. wedding rings). Not to mention symbolic behavior takes many forms that I did not address, such as the capacity to create art. Our cultural capacity, in turn, is not only predicated on symbolic behavior; as a species, we have an immense capacity for adaptation and theory of mind. Future studies would benefit from looking at a suite of symbolic behaviors in the archaeological record or by encompassing many diverse avenues of symbolic and cultural diversity throughout the world today. For now, personal ornamentation as a form of symbolic behavior is best understood as a phenomenon that evolved due to social selection and the selective pressures that accompany it.

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Exploring the Link Between Depression, Cortisol and Inflammation in Filipino Women

Ariella Hoffman-Peterson, Northwestern University

Introduction

Depression is a highly interdisciplinary area of research today as it is dynamic, multifaceted, and complicated by factors of culture, physiology or health, and general wellbeing. Researchers must take culture into consideration when studying depression, as current field methods to determine depressive symptoms come from self-reporting. Such reports are shaped by cultural norms surrounding emotion and depression. Depression and related symptoms may be culturally influenced and can present with different physiological symptoms depending on background. Depression often occurs in conjunction with other negative physiological outcomes and physical or mental health conditions. This inspires inquiry about whether depression originates from contextual triggers including poor health, or whether depression creates a physiological environment that weakens the immune system to cause health problems.

Depression-linked physiological processes may provide insight into possible mechanisms for poor health outcomes found to be co-morbid, or co-existing, with depression. Cortisol is a crucial hormone for normal diurnal sleep-wake rhythms, immune regulation, and inflammatory suppression, but it is also linked to depression and stress. Based on a thorough body of Western-based research, depression is associated with over-expression of cortisol, in which cortisol's normal diurnal rhythm and inflammatory suppressor functions are distorted. This is found to weaken the immune system which influences greater contraction of illness and to exacerbate inflammation. Inflammation is an understudied physiological process that may reveal risks for many aging-related health conditions, such as heart disease or diabetes. Recent research findings reveal co-morbidity of these conditions with depression, although the research has mostly

documented Western populations. Environmental context can have a strong influence on the development of immune systems, so this study aims to understand the relationship of inflammation, cortisol and depression in a novel geographical context where biological and psychological mechanisms may operate differently. We intend to place the research questions about the possible linkage between the physiological inflammatory process and the depression-cortisol mechanism into the broader geographical context of the Philippines in which these processes are yet to be fully explored.

The study focuses on a cohort of middle-aged women (50-70) living in Cebu, the Philippines, with the goal of determining how current understandings of the relationship between cortisol, inflammation, and depression may present differently based on regional and social context. This cohort's immunology, physiology, and experience of depression differ from Western counterparts due to the recent decades of social, economic, nutritional, and cultural shifts that developing countries have undergone. These major shifts place the population at a higher risk for poor health and for unique triggers related to stress and depression. To test the links between depression, cortisol, and inflammation, women with and without depression were given an influenza vaccine to induce inflammation. Levels of cortisol and inflammatory cytokine C-Reactive Protein (CRP) were observed at baseline and three-days post vaccine. The research design allows us to examine if depression affects a person's ability to suppress inflammation.

We expected the depressed group to have higher baseline levels of both cortisol and CRP, which would show that depressive symptoms predict increased levels of inflammation and cortisol. We expected the depressed group to have a blunted cortisol response, as documented in previous research. We expected the depressed group to have a higher inflammatory response due to a reduced ability to cope with induced inflammation. However, no statistically significant

differences were found between the depressed and non-depressed in each of these conditions. We now consider how contextual and environmental factors including the microbial exposure hypothesis may influence these outcomes (McDade et al 2012). We ask how the health, socioeconomic and psychosocial states of the women may influence the outcomes. Finally, we offer suggestions for how the research questions deriving from this study should be prioritized.

Objectives

- (1) Focus on middle-aged women (50-70) in the Philippines as an example of a group native to a region that has undergone environmental, economic, and societal change in their lifetimes, and explore whether these changes affect their mental and physical health as they age. We use an anthropological lens to define the impetus for expanding our understanding of contextual influence on physiological and psychological processes.
- (2) Explore the link between inflammation and depression through a potential mechanism of cortisol activity that plays a role in both conditions. Finding correlations between both the overall and changing levels of CRP and cortisol over this interval may reflect a relationship between depression and inflammation.
- (3) Expand generalizability of previous Western-based cortisol, inflammation, and depression research to a population that has a unique set of circumstances due to its environment, socioeconomic situation, and lifestyle. It may highlight important further research objectives that take regional context into consideration.

Background

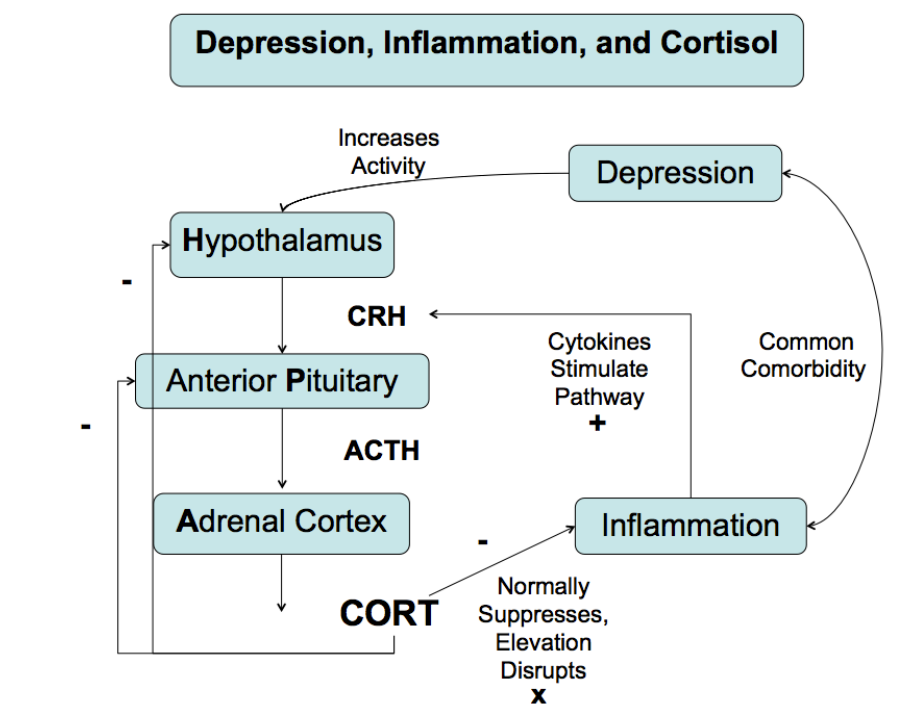
Cebu, Philippines: The Cebu Longitudinal Health and Nutrition Survey (CLHNS) began in 1983 with the recruitment of over 3000 pregnant women from the Metro-Cebu locale with participants

living in 33 randomly selected urban and rural communities or “barangays” in the area. Since 1983, repeated follow-ups have taken place and a variety of research questions related to the effect of regional change have been investigated by participating lab groups. A study by Dahly and Adair (2007) set in Cebu intended to create a better scale to describe the change in urbanicity, or the relative comparability of a given environment to the characteristics of an urban location, which expanded research that traditionally uses a limited “urban-rural dichotomy.” This scale assigned a score based on factors associated with urbanization to each barangay to show the extent of urbanicity. With this scale, they found a trend of increasing urbanicity scores for both originally rural and originally urban areas (in the time frame of 1983-2000), reflecting a broad trend of urbanization in developing countries. Urbanization may have positive and negative implications for life-satisfaction and wellbeing (Dahly and Adair 2007). It also represents life changes and society-specific triggers that may relate to the specific causes of depression in the Philippines, especially for older women who have undergone this transition in their lifetimes. Rook et al. (2013) reviews how urbanicity is often correlated with higher levels of depression and references a meta-analysis study finding that depression is 39% higher in urban areas compared to rural. This suggests urban trends may lead to higher levels of depression.

Another CLHNS study by Adair (2004) focused on the changing nutrition in Cebu, which showed that the health of the cohort was affected by shifting economic and environmental conditions of the region. Adair described overweight and obesity trends and looked for relationships to other influential factors. Between 1983 and 1999 there was a near-6-fold increase in women considered overweight or obese from 6% to 35%. The overall trend of weight gain was positively associated with factors unique to developing regions including urban residence, socioeconomic improvement, higher education, more sedentary work and having fewer

pregnancies. The weight-gain trend has public health implications of higher risk of hypertension and other diseases (Adair 2004). The CLHNS study overall attempts to better understand how inflammation may be a predictor for aging-related diseases including diabetes and atherosclerosis, for which obesity increases the risk (UNC Carolina Population Center, N.D.; Gregor & Hotamisligil 2011). Increased inflammation associated with obesity may be in turn related to depression through the inflammation-depression mechanism. These health concerns central to the efforts to understand the outcomes of environmental shifts of developing regions, and how biological mechanisms can operate differently in various geographical contexts.

Figure 1: Predicted Relationships Between Depression, Inflammation, and Cortisol



The Cortisol Pathway: Cortisol is a biomarker associated with the Hypothalamic Pituitary Axis (HPA), which helps regulate daily functioning through establishing diurnal rhythms that determine the sleep-wake cycle. The HPA axis controls the release of cortisol through a self-regulating pathway as depicted in Figure 1. First, Corticotrophin Releasing Hormone (CRH) is

secreted by the hypothalamus, which acts on the pituitary gland. The pituitary gland secretes adrenocorticotrophic hormone (ACTH), which travels through the blood stream to promote secretion of cortisol by the adrenal cortex. The production of cortisol then initiates a negative feedback loop that tunes down the secretion of both CRH and ACTH to maintain balanced cortisol levels. Cortisol has a wide reach on other body systems because all cells have receptors for cortisol (Silverthorn 2013). Cortisol establishes diurnal rhythms; in the first 30 minutes after waking cortisol levels rise 50-75% and then return to baseline levels after one hour post-waking, with a gradual decline throughout the rest of the day (Preuessner et al. 1997).

Cortisol plays a role in the long-term mediation of stress. It helps the body release stored glycogen for increased energy requirements when placed under stress. Cortisol suppresses the immune system by preventing inflammatory cytokine release and antibody activity, and can help treat stings and allergic reactions by suppressing inflammation. Hypercortisolism is a wide-reaching condition caused by too much cortisol secretion, and symptoms of HPA over-activity include hyperglycemia, tissue breakdown, decreased appetite combined with excess fat deposits to compensate, mood changes, depression, and altered learning and memory abilities (Silverthorn 2013). Although cortisol has an important role in normal functioning, heightened levels over time can be damaging through various mechanisms, some of which are not fully understood.

A study by Stone et. al. (2001) considers individual variation in diurnal rhythms of cortisol secretion. They found that over a two-day sampling period in which six samples were collected per day, 51% of research subjects exhibited strong decreasing patterns throughout the day, 31% showed inconsistent cycles between study days, and 17% had flattened cortisol levels. They found a strong diurnal pattern for a majority of people, showing reliability of the cortisol cycle, but they also found that there is significant variation between people such that an average

diurnal rhythm would not be accurate for each individual in the study. The study also discovered that there is a subgroup that exhibited a flattened cycle, potentially revealing problems with cortisol regulation. It is important note that individual variability may influences the results.

Depression and Cortisol: It has been well documented that those who are diagnosed as depressed show elevated levels of cortisol. A study by Rubin et al. (1987) matched 40 pairs of subjects with and without depression, and found that those who were diagnosed with depression maintained a cortisol rhythm but had overall higher levels of cortisol in the range 8.1-13.6 ug/dl compared to 6.4-9.1 ug/dl 24-hour cortisol concentrations in non-depressed group. Another study utilized a test for studying HPA activity called the metyrapone cortisol synthesis inhibitor test, which reveals HPA activity by suppressing cortisol secretion and tracking the response in depressed vs. non-depressed subjects. Subjects were given the drug at 4 PM, and between 7:30 PM-10 PM, depressed patients had increased corticotrophin secretion (increases cortisol output) compared to normal subjects whose levels did not increase (Young et al. 1994). As represented in Figure 1, depression is linked to increased HPA activity and higher levels of cortisol, particularly in this Western-based research.

One study by Burke et al. (2005) provides an anthropological lens to the issues of cortisol and depression, focusing on low-income women in Urban Mexico in order to provide generalizable information about cortisol responses to stressors in developing regions. Participants took the CES-D (Center for Epidemiological Studies Depression Scale) in Spanish and gave three cortisol samples. They hypothesized that higher baseline cortisol levels and a flatter cortisol response to the stressor of an unannounced visit of survey team would be associated with more severe depressive symptoms, specifically related to the subject's socioeconomic and geographical contexts. The results showed a statistically nonsignificant trend

of higher baseline levels and more severe depressive symptoms ($p=0.08$) and a statistically significant correlation of blunted cortisol response and more severe depressive symptoms. This study demonstrates a method of how to look at physiological and mental health while also attempting to generalize important research questions to populations affected by the stressors associated with socioeconomic change and development.

Depression, Cortisol & Inflammation: Raison et. al. (2006) focused on the pathogenesis of depression by combining research about the linkages that depression has exhibited to biomarkers of interest including inflammatory cytokines and cortisol. They review multiple pathways and interactions between depression, inflammation and cortisol levels. Inflammatory cytokines such as IL-6, CRP, and TNF- α are heightened for depressed individuals, and conversely diseases in which inflammation occur such as heart disease are often found to be accompanied by depressive symptoms. Inflammatory cytokines are also found to have a downstream stimulatory affect on the cortisol secretion pathway, further interfering in the connected roles of cortisol and inflammatory cytokines (Raison et al. 2006). Normally, cortisol suppresses immune processes including inflammation by preventing the release of many of these cytokines (Figure 1). However, chronically elevated levels of cortisol associated with depression, disrupts this suppressing function (Silverthorn 2013). To measure inflammation in conjunction with depression, CRP is a useful biomarker because it is released in response to other messenger cytokines including IL-6. High sensitivity CRP assays can detect small changes in CRP levels to monitor the inflammatory response (McDade 2006).

Posthauer et al. (2004) examined changes in CRP levels to assess whether influenza and pneumonia vaccines could be used as short-term inflammatory inducers. Overall, CRP levels increased from baseline when measured at two or three days and by four or five days, levels

returned to baseline. This confirmed vaccines to be temporary models for the inflammatory process. In another study by Vedhara et al. (1999), the vaccination was framed as an immunological challenge in the context of depression in older adults. Subjects received an influenza vaccine and blood samples were collected before the vaccine and two weeks later. The Beck Depression Inventory test and pro-inflammatory cytokine IL-6 responses were assessed. IL-6 levels increased more from baseline two weeks after the vaccine for those having more severe depressive symptoms. This suggests that a vaccine that induces some inflammation may be harder to cope with for individuals having higher levels of depression, especially in older people in which these factors may be exacerbated.

McDade et al. (2012) challenged the generalizability of prior depression and inflammation research on the grounds that it has mainly been conducted in Western populations. Despite robust correlations between depression and inflammation based on Western populations, this study in Cebu found no statistically significant relationships between depressive symptoms and general levels of inflammation. They propose a number of plausible explanations that may be relevant to interpreting the results of this study. There is a possibility that the CES-D index may not be sensitive enough to find an association between depression and inflammation. There is also the potential for study design problems reflected in the relatively low concentrations of CRP across the sample. Finally, they point to prior research that shows that environments with higher microbial exposure in infancy have better inflammatory regulation - this may be relevant in a non-Western population where microbial exposure would be more common. Rook et al., (2013) coined the term “Old Friends Hypothesis,” which McDade et al. refers to here. The “Old Friends Hypothesis” suggests that the recent increase in the prevalence of inflammatory disorders is related to the rapid reduction of exposure to largely non-pathogenic microbes. Humans evolved

along with microbes and other organisms that are thought to serve help the immune system develop in early life. This includes the development of inflammatory regulation system; inflammatory response is more extreme and levels of inflammation are more often chronically high in geographical areas where microbial exposure is lower, such as Westernized countries. Rook makes the connection between inflammation and psychiatric disorders, because inflammatory mediators have been found to affect brain development, cognition, and mood. He proposes that because higher inflammatory responses have been linked to social context, socioeconomic status, as well as depression, inflammation may influence poor stress resilience. It is possible that the interaction between inflammation and microbe exposure in the early life environment alters the inflammatory response, such that the causes of depression and its physiological correlates may vary based on geographical contexts.

McDade et al.'s study (2015) illustrates the usefulness of a functional inflammatory test that can show the acute processes of inflammatory regulation. They find that an influenza vaccine is a valid and viable testing procedure to study the inflammatory process in the Cebu population and report a significant inflammatory response of a 30.2% increase in CRP over the three-day period pre to post-vaccination. They note that other studies have found lower vaccine responses in places such as the Netherlands, but found much higher increases nearing 40-60% increases in the U.S. The differences in vaccine response suggest that environment and early life exposure may affect inflammatory regulatory systems as explained by the "Old Friends Hypothesis" (Rook et al. 2013). The McDade et al. (2015) study shows that the influenza vaccination is a good functional measure of the inflammatory process and uncovers the likelihood for altered biology in this context. The authors also explain potential complications for regions such as Cebu due to higher levels of infectious disease and leading to higher baseline levels of inflammation.

Although the “Old Friends Hypothesis” predicts better regulation of inflammation due to more microbial exposure than in Western regions, it does not account for higher levels of infectious disease. Although individuals may have better regulation of inflammation, acute illness at the time of vaccination would simply interfere due to artificially high levels of illness-caused inflammation, altering the CRP response. McDade et al. (2015) cautions the inclusion of sick individuals, because they found an attenuation trend in which the CRP response was less significant with higher baseline CRP levels stemming from infectious disease. The study reaffirms the need to understand CRP response in this geographical context, as the process seems to operate differently when compared to other settings. The modest CRP response in this population may illustrate the “Old Friends Hypothesis” that microbial exposure in infancy has an important role in the development of a healthy inflammatory regulation system.

Research Questions

- Do middle-aged Filipino women with depression have a heightened inflammatory response when given a pro-inflammatory vaccine as compared to non-depressed women?
- Does cortisol link depression and inflammation by interfering with depressed subjects’ ability to suppress inflammatory responses?
- Do processes of depression, cortisol responses, and inflammation differ in a population with a vastly different sociobiological context than that of a large portion of study participants in the existing body of research in this topic?

Methods

Subject Participants and Protocol: From the original CLHNS population of about 3000 women, between April-December 2012, 967 participants were given an influenza vaccine injection using

the South hemisphere composition for 2012 (Sanofi Pasteur, Vaxigrip single dose, 0.5 mL) (McDade et al. 2015). This is mutually beneficial as it allows researchers to observe responses to inflammatory nature of receiving a vaccination, while also providing flu protection. On the day of vaccination physicians screened participants; anyone presenting illness was rescheduled to prevent confounding of inflammation results. Standard finger stick blood collection using a lancet and the filter paper storage method was performed at baseline and three days post-vaccination at comparable times for each subject, one hour post-wake time on both days.

In an interview for each participant, basic demographic information, World Health Organization (WHO) quality of life survey (WH Organization n.d.), shortened CES-D index (Radloff, 1977), and basic physical data were collected for all participants. The average interval between interview and vaccination was 51 days (McDade et al. 2012). After data collection participants were separated into two experimental groups based the depressive symptom index (McDade et al. 2012). A total of 76 individuals aged 50-70 were selected for cortisol and CRP analysis; 40 characterized as the “depressed group” and 36 as “non-depressed group.” The data was collected in accordance with informed content protocol under the institutional review board of University of North Carolina, Chapel Hill.

CES-D Depression Index: Participants completed a shortened version of the CES-D depression index translated into the local language (see questions in Appendix 1). The score consists of 15 adapted questions from the full CES-D that ask how often on a 3-point scale they experience feelings associated with depression and happiness (Radloff 1977; McDade et al. 2012). This takes into account symptoms related to depression, but does not serve as a diagnosis. Subjects were divided into quintiles based on their index scores, such that the top two groups with the most depressive symptoms comprised the “depressed” group and those in the bottom two groups

comprised the “non-depressed” group (McDade et al. 2012). The limitation of the CES-D index is that it may not capture a clinical diagnosis of depression.

Dried Blood Spot Analysis: The ideal field method for blood collection is dried blood spot (DBS) analysis. The filter papers (Whatman #903) used to collect blood can be stored in the field for one week and then must be sent to be frozen. This is a minimally invasive technique that is convenient for storage and transportation from the field in Cebu to the Human Biology Lab at Northwestern. However, a study design limitation is that only one blood sample per day will be taken at one hour after waking, at baseline and 3-days post vaccination, which may not show full sensitivity cortisol diurnal rhythm. This maintains feasibility, simplifies analysis and focuses on the CRP and cortisol responses to vaccination. McDade (2014) offers a general outline for adapting biomarker tests for dried blood spot analysis, which requires assay kits that are sensitive enough to detect small changes in biomarker levels.

CRP Assay: The CRP assay for DBS has been validated in the Human Biology lab (McDade et al. 2004). Single dried blood spots (3.2-mm) are reconstituted, then added to a plate (cat. no. 439454; NUNC Maxisorp) coated in CRP-antibody (cat. no. A0073; Dako). The CRP in the reconstituted blood spot sample binds to the plate, excess material is washed away and a second detection antibody attached to a color-changing enzyme (peroxidase-conjugated rabbit anti-human CRP antibody (cat. no. P227; Dako)) is added to the samples. The color change can be read by the Biotek ELx808 plate reader; intensity of the color change corresponds to the amount of CRP in the sample. A standard curve is established from five known concentration samples (KCJunior; BioTek), in which each sample is compared to this curve in order to establish concentrations of each biomarker (McDade et al. 2004; McDade 2014). The CRP analysis was conducted for each subject pre- and post-influenza vaccination.

Cortisol Assay: A protocol developed by Enzo Life Sciences for adaptation of cortisol serum assay kit (cat. no. ADI-901-071) to DBS analysis was first validated through the use of known cortisol test samples (cat. No. 33605; Beckman Coulter). The cortisol assay was evaluated by determining the lower detection limit for the blood spot assay through comparison of calculated measurements in random samples to controls (cat. no. BioRad 370; Trilevel) with known concentrations of cortisol (KCJunior; BioTek). The assay color change was read by the plate reader. Once validated, cortisol assay was used on all the study subjects pre- and post- influenza vaccination using DBS methodology described above (McDade et al. 2004; McDade 2014).

Data Analysis: Descriptive statistics were used to compare the two experimental groups, depressed and non-depressed, to assess overall comparability of basic variables. Age, education, urbanization, waist circumference, smoker status, infectious disease at the time of analysis, and anti-inflammatory drug use were considered in comparing the two groups. For this analysis, the aim was to look for statistically significant differences between the means of the two major variables (cortisol and CRP) at the relevant experiment time points. Bivariate ANOVAs were used to compare these averages using STATA. In order to confirm a significant vaccine response in the overall group, a Wilcoxon Sign-Rank Test was employed as a non-parametric test. CRP data is typically skewed, so it was transformed logarithmically (base 10) to normalize the distribution (McDade et al. 2015). This was not necessary for the cortisol data.

Results

Table 1: Descriptive Statistics

Variable	Depressed (n = 40)		Non-Depressed (n = 36)	
	Mean (SD)	Range	Mean (SD)	Range
Age	54.4 (3.0)	46.3-70.3	54.5 (5.7)	46.9-65.7

Education	5.7 (2.9)	0-12	7.1 (2.9)	0-13
Urban (%)	82.50%		97.20%	
Waist Circumference (cm)	79.1 (10.1)	58.1-100.1	85.5 (11.2)	64.6-117.0
Smoker (%)	10%		16.70%	
Infectious Disease (%)	5%		2.8%	
Anti-Inflammatory Drug Use (%)	7.5%		0%	

The average age for the depressed group was 54.4 years, and for non-depressed it was 54.5 years. In the depressed group, 5% of subjects showed infectious symptoms at the time of vaccination, compared to 2.8% of subjects in the non-depressed group. 7.5% of depressed participants and none of the non-depressed patients used anti-inflammatory drugs at the time of vaccination. 10% of the depressed group smoked, compared to 16.7% in the non-depressed women. These basic comparisons confirm the two groups are comparable.

Table 2: One-Way ANOVA Summary

Test	Mean (SD)		F
	Depressed	Non-Depressed	Significance of Difference
Depressive Symptoms (CES-D Score)	25.9 (1.9)***	19.2 (2.4)***	186.6
Cortisol Pre- (ug/dL)	4.23 (2.15)	4.05 (2.08)	0.13
Cortisol Post- (ug/dL)	4.27 (2.27)	3.93 (1.36)	0.62
Cortisol Response (ug/dL)	0.04 (2.00)	-0.12 (2.19)	0.12
CRP Pre- (mg/L)	1.51 (1.56)	1.67 (1.41)	1
CRP Post- (mg/L)	3.08 (7.67)	2.18 (1.60)	1.24
CRP Response (mg/L)	1.57 (7.17)	0.51 (1.28)	0.09

Descriptive statistics:

The one-way ANOVA based on depressive symptom scores (Table 2) distinguished that the difference between depressive symptoms in the depressed (mean=25.9) and non-depressed (mean=19.2) group was statistically significant ($p<0.001$).

Depression and the Cortisol Response

Hypothesis #1: At baseline Cortisol levels will be higher in women with depression than women without depression.

We expected baseline cortisol levels to be higher in women with depression based on previous observations (Rubin et al. 1987; Young et al. 1994). In our sample, for women with depression the average baseline level of cortisol was 4.23 ug/dL compared to non-depressed women with an average baseline level of 4.05 ug/dL. While a small difference is visible in the means, this is not statistically significant ($p= 0.7147$) in a one-way ANOVA test (Table 2).

Hypothesis #2: Cortisol levels will show a greater increase over the three-day period pre- to post- Influenza vaccination for women without depression than women with depression.

Due to blunted cortisol responses observed in women with depression (Burke et al. 2005), we expected a greater cortisol increase for women without depression. In depressed women we saw a increase in cortisol levels over the three-day period of 0.04 ug/dL. In non-depressed women we saw a decrease in cortisol levels of the three days of -0.12 ug/dL. The difference in responses was not statistically significant according to a one-way ANOVA test ($p= 0.7332$) (Table 2).

Depression and the CRP Response

Hypothesis #3: At baseline CRP levels will be higher in women with depression than women without depression.

Based on the documented relationship between depression and heightened inflammation, we expected higher levels of general inflammation at baseline for women with depression. The

average CRP baseline level for the depressed group was 1.51 mg/L and for the non-depressed group it was 1.67 mg/L. Values were transformed logarithmically (base 10) to normalize the distribution. Using the transformed data, a one-way ANOVA showed no significant difference between these average CRP baseline values ($p = 0.3216$) (Table 2).

Hypothesis #4: CRP levels will show a greater increase over the three-day period pre- to post-Influenza vaccination for women with depression than for women without depression.

Due to a blunted cortisol response, generally higher levels of cortisol, and altered inflammatory suppression documented in previous research in depressed patients, we expected a larger increase in CRP inflammatory levels in the depressed group compared to non-depressed group. The increase for depressed women was 1.57 mg/L compared to 0.51 mg/L in the non-depressed group. A transformed CRP data (log base 10) ANOVA did not reveal a significant difference ($p = 0.2681$) between the experimental groups (Table 2). There was a statistically significant CRP response to vaccine for the whole group ($p < 0.0001$, Wilcoxon Sign-Rank Test), suggesting the vaccine response is comparable in the smaller sample group to the overall study population.

Discussion

Inflammation may be an important indicator for health problems associated with aging, including heart disease and diabetes. The inflammatory process is essentially reflective of damage that the immune system must work to repair. While acute inflammatory measures may reveal the immediate healing process the body undergoes, chronic inflammation may reflect longer bouts of illness or the potential for more serious chronic illnesses. The over-use of these systems may mean that a body is not coping well, and may worsen the problem cyclically. We see in the literature that depression is related to heightened inflammatory response, likely because cortisol

is higher in those with depression, which deregulates cortisol's normal inflammatory-suppressing properties. A deregulated inflammatory response as in the case of depression means that the body would not be able to cope with induced inflammation normally, nor properly cope with illnesses that cause inflammation. The results of this study suggest that in the Philippines, middle-aged women with depressive symptoms are not at higher risk for a deregulated inflammatory system, as prior research would suggest. It seems that depression, inflammation, and cortisol are operating differently in this non-Western geographical example compared to Western counterparts in which these links have been established.

Testing for cortisol using this research design allows us to explore the depression mechanism in Filipino women more closely. According to Western population based research, cortisol and depression inform one another biologically. People with depression have shown chronically high levels of cortisol that is thought to lead to the deregulation of the HPA axis such that the cortisol response is blunted in these individuals. However, in the Filipino study participants, there was no significant difference between the depressed and non-depressed women for baseline cortisol or for a cortisol response to vaccination. There are two viable explanations for this. First, although the CED-S version has been applied in the Philippines before (McDade, et al. 2012), the depressed group was characterized as having high levels of depressive symptoms that may not capture a clinical diagnosis of depression as reflected by the CES-D limitations stated by Radloff (1977). Women within the depressed group may not truly have depression and therefore their cortisol response would likely operate normally and they would not show higher baseline cortisol levels. This is a study limitation, in that the field method for characterizing depression is unable to diagnose clinical depression (see Appendix 1). Second, it is possible that depression-related processes in Filipino women operate differently

psychologically and biologically. Their immune systems may be more robust and resilient, facilitating a more reliable cortisol response that allows them to cope better even with depression. Cortisol levels and response seem to be unaffected by depressive symptoms, and thus it is unlikely that cortisol would be influencing the inflammatory response abnormally.

Like cortisol, chronically high levels of inflammation have also been linked to depression. Because the inflammatory process is normally suppressed by cortisol, the deregulation of cortisol associated with depression can influence the regulation of inflammation. Results indicate that both baseline CRP and the CRP response show no significant difference between non-depressed and depressed groups. This outcome may be related to the normal cortisol response we see in the depressed group. With normal levels of cortisol, the inflammatory response would not likely be deregulated. If Filipino subgroups with elevated cortisol levels are found to also have deregulated inflammatory regulation, this would indicate a more universal biological mechanism. The findings of this study do not support cortisol as a linking mechanism to inflammation, nor are they able to reject the link. The cortisol study design is limited by the fact that cortisol is more often tested through multiple measures taken throughout the day, to account for diurnal rhythms of cortisol. One sample at one-hour post wake may not adequately measure the cortisol response. Thus, the inflammatory response is independently an important test to determine if depressive symptoms negatively affect the immunology of Filipino women.

If depression operates differently for the women in this population or is not representing chronic depression, their inflammatory response systems may be fully operational, explaining the lack of statistical difference between the two groups. However, the “Old Friends Hypothesis” poses the most compelling explanation, suggesting that the Philippines could present an environment where exposure to mostly non-pathogenic microbes in infancy promotes the healthy

development of the immune system, including the regulation of inflammation. McDade et al. (2015) shows a moderate vaccine response that is significantly lower than responses found in the U.S. It is likely that depressed individuals in the Philippines are coping normally with inflammation in part because their systems have adapted to the environment, which has supported inflammatory regulation. This study suggests that women with depression do not cope differently with inflammation compared to those without depression in the Philippines. Overall, the sample population indicates a different and more robust inflammatory regulation process when compared to Western populations. This supports the hypothesis that sociobiological context influences physiological processes and contributes to generalizability of the research questions to other contexts more similar to the Philippines than to the Western context represented by the existing body of literature.

The first step to expanding on this study would be to consider using a larger sample size, as the results might be masked in this group due to low statistical power. A larger sample size may increase statistical power such that we would be more likely to see the real difference between these conditions. However, other studies have used similar sample sizes in studying depression, including Rubin et al. (1987) who used 40 matched pairs of depressed and non-depressed individuals. McDade et al. (2015) studied the CRP vaccination response in 934 women in the middle age cohort from which this study retrieved samples (N=76). To divide this much larger cohort into depressed and non-depressed groups would be a simple way to ensure that indeed no significant difference exists for the inflammatory response to vaccination, and to reveal if statistical power may have masked similar results in the current cohort (N=76). If a difference is found in this larger cohort, it would be useful to perform the cortisol analysis on this much

larger group. However, because the CRP response in this study was overall similar to the larger cohort, it is unlikely a difference based on depression will be found.

Another direction to expand the scope of this research would be to consider the possible covariates that may be masking cortisol or inflammatory responses. This includes those variables listed in the descriptive statistics table that fall into the category of possible physiological confounders. For example, the use of anti-inflammatory drugs, and having infectious symptoms would both directly affect the inflammatory response. Although the percentage of the group affected was small for these variables, accounting for these covariates could alter the findings. Additionally, other quality of life factors could act as covariates and influence both psychological and physiological processes. For example, socioeconomic status may create a propensity for depression, but also have a greater physiological affect through poor nutrition, stress, and illness, and therefore might capture a difference in the inflammatory response. Additional analysis may yield interesting results that would give more insight into how geographical context is influencing the ability to cope with both depression and inflammation.

This study demonstrates that sociobiological context likely leads to very different development of physiological systems, including the immune system. This may be due to early life exposure to immune challenges that serve as inducers for healthy development of inflammatory regulation. This study underscores the need for further study in the area of depression as it relates to immune processes. One element of this is the need to further explore the validity of the CES-D index as a method for capturing depression. To better utilize the CES-D index and determine its efficacy, cross referencing research that connects the CES-D symptoms with clinical depression would help determine whether the CES-D is capturing the most salient symptoms for clinical depression. Perhaps clinical diagnosis of depression in a

targeted, smaller group would help clarify whether the links between depression and inflammation are visible in severe cases of depression. It may also be more accurate to conduct a study that takes into account variations of cortisol rhythms through more typical experimental methods for cortisol exploration. This study warrants the exploration of better methodology and consideration of other research questions that further the understanding of depression as it relates to immunology in different geographical and societal contexts, including the Philippines.

Conclusion

The major strength of this study is that it expands on previous research done in the CLNHS series of studies by focusing on depression and considering whether the proposed cortisol mechanism through which depression and inflammation are linked is operating as expected in a geographical context that differs from the Western context represented in the existing literature. Previous research by McDade et al. (2012) shows that depressive symptoms do not predict higher baseline levels of inflammation (CRP). This study shows that depressive symptoms are not predicting the heightened cortisol levels often associated with depression. If cortisol is the mechanism responsible for an increased inflammatory response, then the absence of a deregulated cortisol response in the depressed group may explain why depressive symptoms are not correlated with the inflammatory response. This study also utilized the findings of the research study of McDade et al. (2015) that indicates vaccination is a useful functional test for the inflammatory process, as it elicits an acute inflammatory response. This study links depressive symptoms to this functional measure of vaccine response, and confirms that depressive symptoms do not predict different acute inflammatory responses. This reaffirms the importance of considering contextual sociobiological influences for many physiological

processes, and stresses the need for generalizable research. Our current models of depression, cortisol, and inflammation need to be revised to reflect population-specific behavior of these mechanisms. This research shows the complexity of the relationship between mental and physical health. We urge the scientific community to expand research efforts surrounding depression and health in non-Western settings.

Appendix 1: CES-D Section of the 2005 CLHNS Questionnaire

K30 We would like to know how your health has been in general over the past four weeks. Please answer how frequently in the past four weeks did you experience these common feelings or problems.
ENTER CODES IN TABLE K-3

1 -	None of the time	3 -	Most or all of the time
2 -	Occasionally		

Table K-3

	CODES
You were happy	
You had headaches	
You had poor digestion	
You had difficulty falling asleep	
You felt lonely	
You were hopeful about the future	
People were unfriendly	
You were worried	
You felt you couldn't overcome difficulties	
You were able to face problems	
You felt people disliked you	
You enjoyed normal daily activities	
You thought of yourself as worthless	
You felt life isn't worth living	
You wished you were dead	
You had the idea of taking your own life	

The coded scores (1-3) were summed and divided into quintiles to determine the depressed and non-depressed group based on the highest and lowest quintiles respectively. Positive items were reverse scored.

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