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The traditional food of migrants: Meat, water, and other challenges for dietary advice. An ethnography in Guanajuato, Mexico

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ABSTRACT

The term "traditional diet" is used variously in public health and nutrition literature to refer to a substantial variety of foodways. Yet it is difficult to draw generalities about dietary tradition for specific ethnic groups. Given the strong association between migration and dietary change, it is particularly important that dietary advice for migrants be both accurate and specific. In this article, I examine the cultural construct of "traditional foods" through mixed method research on diet and foodways among rural farmers in Guanajuato, MX and migrants from this community to other Mexican and U.S. destinations. Findings reveal first, that quantitatively salient terms may contain important variation, and second, that some "traditional" dietary items –like "*refresco*," "*carne*," and "*agua*" – may be used in nutritionally contradictory ways between clinicians and Mexican immigrant patients. Specifically, the term "traditional food" in nutritional advice for Mexican migrants may be intended to promote consumption of fresh produce or less meat; but it may also invoke other foods (e.g., meats or corn), inspire more regular consumption of formerly rare foods (e.g., meats, flavored waters), or set up financially impossible goals (e.g., leaner meats than can be afforded). Salience studies with ethnographic follow up in target populations can promote the most useful and accurate terms for dietary advice.

1. Introduction

The term "traditional diet" is used variously in public health and nutrition literature to refer to the pre-colonial and wild foods of colonized groups (Bersamin, Zidenberg-CherrStern, & Luick, 2007, 139; Blanchet, DewaillyAyotte, Bruneau, Receveur, & Holub, 1999; Kuhnlein & Receveur, 1996; Leatherman, 1994; Neuhouser, Thompson, Coronado, & Solomon, 2004; Shintani, Hughes, Beckham, & O'connor, 1991), to post-migration diets of rural or agrarian migrants now living in industrial contexts (Chambers, Pichardo, & Davis, 2014; Guarnaccia, Vivar, Bellows, & Alcaraz, 2012; Lee, Popkin, & Kim, 2002; Neuhouser et al. 2004; Popkin, 2001; Wandel, Råberg, Kumar, & Holmboe-Ottesen, 2008s), or to historically consumed foods in communities facing aggressive market pressures on diets (Schröder, Marrugat, Vila, Covas, & Elosua, 2004; Trichopoulou & Lagiou, 1997; Wiedman, 2010). Despite this substantial variation, both linguistically and in terms of dietary content, the term remains a common theme in nutrition and acculturation research. Dietary advice for migrating and acculturating groups that is drawn from these literature may be confusing or offer unachievable instruction. As Fagerli, Lien, and Wandel (2005) have shown, clinicians must be able to communicate with both dietary and cultural-linguistic relevance for these vulnerable populations.[1] Given the well-documented nutrition transition in many parts of the world toward less healthy foods (Popkin, Adair, & Ng, 2012), the concept of a "traditional diet" deserves greater circumspection in public health nutrition and clinical practice.

Mixed method studies of acculturation and dietary change have produced divergent conclusions about the manner and form of change from "traditional" consumption patterns to contemporary ones (Abraído-Lanza, Armbrister, Flórez, & Aguirre, 2006; Ayala, Baquero, & Klinger 2008; Booth et al. 2001; Chambers, Pichardo, & Davis, 2014; Romero-Gwynn et al. 1993; Satia-Abouta, Patterson, Neuhouser, & Elder, 2002). For example, trends indicate that Latino immigrants "acculturate" to consume fewer fruits, vegetables and beans than in a "traditional healthful diet," substituting more sugar and sugar-sweetened beverages (Ayala et al., 2008,

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[1] See also new areas of research in food lexicons (e.g., Gmuer et al. 2015).

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1331; Neuhouser et al. 2004). Yet because migrant group cohesion and adaptability vary by location and over the life course, it is difficult to generalize dietary change into group/ethnic models of acculturation (Lockwood, Lockwood, Abraham, & Shryock, 2015; Martínez, 2013; Renne, 2016). Instead, dietary acculturation involves a variety of cultural, social, demographic, and socioeconomic influences (Ebrahim et al. 2010; Guarnaccia et al. 2012; Kleiser, Mensink, Neuhauser, Schenk, & Kurth, 2010; Lawton et al. 2008; Nicolaou et al. 2009; Renzaho, 2004; Wandel et al. 2008). And the acculturation paradigm is now expanded by a wealth of more granular research on "constructs" like parenting, familism, and cohesion operating in the decisions and behaviors of migrants (Jasso & Becerra, 2003; Pearson, Biddle, & Gorely, 2009a; Pearson, Biddle, & Gorely, 2009b; Sussner, Lindsay, Greaney, & Peterson, 2008; Smith-Morris, Morales-Campos, Alejandra Cataneda Alvarez, & Turner, 2012; Vega et al., 1986).

In this article, I examine the cultural construct of "traditional foods" through mixed method research on diet and foodways among rural farmers in Guanajuato, MX and migrants from this community to Mexican and U.S. destinations. The specific goal was to determine whether the concept of "traditional food" was salient for a community of rural Mexicans and Mexican immigrants. My discussion contributes case data on the construct of "traditional food" for migrant populations, and offers a critical assessment of this term for dietary advice. Specific attention is given to the salient terms *maíz* (corn), *carne* (meat), *agua* (water), and "traditional food".

2. Methods

This research was a multi-year, multi-site ethnographic investigation of the needs and support systems of binational Mexican families vis-à-vis changing dietary patterns over time and location. Research sites included a Mexican *rancho* (village), that community's primary internal migration site, and it's primary external migration site. As an anthropological ethnography, the study produced quantitative and descriptive data about these Mexican/immigrant informants, as well as more detailed narratives on migration, family structures, foodways and mealtime habits. Like Baer (1998), Himmelgreen, Romero Daza, Cooper, and Martinez (2007), and others engaged in collaborative and cross-disciplinary research on dietary change, I contrast quantitative methods with extended interview and participant observatory data on locally unique issues.

2.1. Research sites

The primary site for this research, El Gusano, is a small, farming *rancho* with no commercial activity beyond a handful of home-front *tiendas* (shops) selling mainly snacks, paper products, and cleaning supplies. In El Gusano, participant observation, free listing activities, interviews, and dietary surveys were conducted. Two additional sites that were essential to understanding the context of migration were Dolores Hidalgo and Dallas/Fort Worth (among El Gusano and other Guanajuato families who had migrated to those destinations). Dolores Hidalgo is the *municipio* (county center) serving El Gusano, and a town of approximately 55,000 residents, county government offices, two university campuses, and numerous commercial and infrastructural developments. Dallas/Fort Worth is a large, metropolitan center in the U.S. and the primary international migration destination for residents of El Gusano. In Dolores Hidalgo and Dallas/Fort Worth, interview and participant observation data, but no free-list data, were collected.

2.2. Recruitment and sample description

Recruitment in El Gusano occurred in collaboration with a local development foundation, la Fundación Comunitario del Bajío (FCB) and with the invaluable assistance of two local *promotoras* who were able to introduce us to nearly all of the 60 families in the village. El Gusano residents are subsistence farmers who supplement their income through produce sales in nearby towns and occasional wage labor of some household residents. Almost half (43%) of sampled households received remittances from internal and international migrant family members. The average age of our informants was 42 years, and their average highest grade level achieved was 5.0. We interviewed equal numbers of men and women. Average household income was $56 US with an average $33 US spent on food.

These informants were interviewed in their homes or community locations. Recruitment and general rapport/trust-building were improved by the live-in presence of both the author and research assistants for several weeks prior to the beginning of, and during, data collection; and by the affiliation of our project with the ongoing community development network sustained by the FCB. The researchers lived with several key informants, shared all meals with them or other community members, and participated in events at the rancho's community building. We thereby spoke with or met at least a third of our sample prior to recruitment.

Following an informed consent procedure approved by the [institution name removed] IRB, a sample of 30 informants provided free-lists to the prompt of "traditional foods" (Bernard, 2002). An additional sample of 30 informants provided semi-structured, recorded interviews, and completed a battery of survey-style questions on the topics of migration, family, and foodways. Demographic characteristics of the sample are reported elsewhere (citation deleted). Field notes taken during participant observation were produced at least nightly, and discussed every 3 days across team members and with select key informants (selected depending on topic) following grounded analysis techniques (Bernard, 2002).

2.3. Research design

For the free listing activity, informants were asked, "name what you consider to be traditional food". If clarification was requested, informants were told to define "tradition" however they viewed it, and all subsequent answers were encouraged and included. For example, if the respondent then asked, "do you mean traditional for Mexico?" or "traditional for me?," the answer was always "yes, whatever you consider 'traditional food'". All responses were recorded in order of utterance, and informants were given ample time to exhaust their ideas on this term.

For in-depth ethnographic interviews, a 30-item interview guide was used and included prompts for a description of meals (with whom, roles, where, what was eaten), possible sources for food, and what migrants eat while away. At least the top eight Salient items, and sometimes additional food items, were also discussed.

2.4. Data analysis

Free listing is a "deceptively simple" technique that is "a mainstay of rapid assessment research" (Bernard, 2002, 282–285). By evaluating not simply the frequency with which terms are mentioned by informants, but also taking into account the order of their mention, the value of this technique is expanded (Romney & D'Andrade, 1964). Smith's (1993) method for computing a free-list salience index was used to take into account both frequency and order of mention, and yielded the quantitative data below. For this

analysis, raw data were first coded through two separate blind codings in Spanish, and reconciled through a consensus method by a native Spanish-speaking RA and the author (Bernard 2002).

Recorded interviews were transcribed in Spanish and placed in Atlas.ti qualitative data analysis software for coding. Field notes were tagged manually and selections transcribed digitally for coding in Atlas.ti. Upon completion of data collection, narrative coding was performed on the interview transcripts and field notes as described above. This team also corroborated translation of the codes and select narratives into English for publication. Themes drawn from coded transcripts yielded qualitative data, only a portion of which is discussed below. For the purposes of this discussion, I discuss only those narrative codes that were clearly tied to the salience Analysis.

3. Results 1 – salience of "traditional food"

In Smith's (1993) salience index of free-list data, the higher the salience index for an item, the earlier and more frequently the item was mentioned on average by informants. Other measures of salience have been used constructively to understand semantic domains and the broader cultural domains of which they are a part (Gravlee, 2005; Smith, Furbee, Maynard, Quick, & Ross, 1995; Thompson & Juan, 2006). My approach was to use Smith's salience and its components as the touchstone for deeper and more targeted ethnographic observation and interview. This approach emphasizes the value of deep ethnographic description of local variation (Antmann, AresVarela, Salvador, Coste, & Fiszman, 2011; Hough & Ferraris, 2010). Below, I briefly review the key differences between Frequency of Mention, Sequence (or Order of Mention), and the final Smith's salience in the free-list data (see Table 1).

3.1. Frequency of mention

All terms listed by informants in response to the prompt, "name what you consider to be traditional food" are listed in Fig. 1. Informants listed 49 unique terms with 15 of these items listed by a single informant. Eight (8) items were listed by a minimum of 10 informants and frequency drops off rapidly for the rest of the list. These items are: *maíz* (corn), *frijoles* (beans), *carne* (meat, unspecified type), *sopa de fideo* (soup with pasta), *chile* (chili), *carne de pollo* (chicken), *agua* (water: pure, with fruit, flavored), and *arroz* (rice).

3.2. Average Index (order of mention)

The sequence in which items are freelisted by informants allows analysis of early mentions versus late mentions of a term relative to list length. Since the length of informant lists is influenced by memory, circumstances of the interview, possibly even season of the year in this farming community, it should not be taken as a precise and direct reflection of the importance they place on the order of these items. Nevertheless, it is influential in Smith's Sequence statistic and provides valuable insight to specific items in the domain of "traditional food".

Each item sequence position is converted to a percentile position within each list, thus representing the relative importance of the term vis-à-vis the informant's entire list of terms, allowing comparison of informant lists of differing lengths, without losing a sense of the relative order of mention of terms as they were originally given. The Average Index takes the average of all sequence orders for each term across all informants. The higher the Average Index, the earlier and more frequently the item has been mentioned - on average - in free lists generated by informants. Once each code has an Average Index, these can be ordered into a percentile ranking. The formula for this calculation takes the difference between the sequence number of an item and its total count, divided by its count and multiplied by 100 [expressed as (count − sequence)/count] × 100]. This is the Average Index Summary, and can be thought of as an item's percentile ranking for the free listing data set as a whole. The five highest Average Index items were: *frijoles*, *chile*, *tomates/jitomates* (tomatoes), *avena* (oats or oatmeal), and *sopa de fideo*.

3.3. Salience

The final statistic, salience is the sum of all Average Index scores for each term over the total number of different terms. Each food item's number of mentions, and order of mentions relative to the data set as a whole is contained in this statistic. This statistic gives the gross mean percentile rank of an item across all lists [and follows the formula: salience = (Sum of the item's percentile ranks/Total number of lists)]. It is thus a weighted average of the inverse rank of an item across multiple free-lists. It is a measure that captures frequency of mention, order of mention, and relative rank within lists for the data set as a whole. The top five salience items were: *maíz*, *frijoles*, *agua*, *carne de res* (beef), and *carne de pollo*.

The top items in the salience analysis confirm a pattern over centuries of Mexican foodways based in corn, beans and meat when available (Baer, 1998; Pilcher, 2012). In other words, corn, beans and meat are part of a shared concept of "traditional food" for this community. These data conform to known patterns for the larger Mexican population, and offer a salient model of "traditional foods". More specifically, 8 items (corn, beans, meat, *sopa de fideo,* chicken, chili, *agua,* and rice) were mentioned by at least one-third of informants, with the frequency dropping off rapidly for subsequent terms.

However, a comparison of all three plots suggests that any single metric may overlook or even mask important local details. The dotplot images in Fig. 1 offer a quick visual comparison of the three main components of Smith's salience. For example, only one of the most frequently mentioned items was also the earliest mentioned (beans). Also, several early-mention items were listed by only a few informants (*tomates*, *avena*). For further analysis of these contrasts, I turn now to ethnographic interview data on these items of either high Frequency of Mention (F), high Average Index (AI), or high salience (S). Four items merit deeper consideration: *carne, agua, refrescos* (refreshments or sodas), and another small subgroup of items which I will discuss "flavor and emotion".

4. Results 2 - salience data in ethnographic context

4.1. Carne (meat) and dietary advice

The salience of *carne*, or meat, refers to four different coded terms. Informants listed *carne* or some type of meat (e.g., roast beef, sausages, hash) as a "traditional food" a total of 41 times during the free listing activity. Meat presented a challenge during coding, however, because we were reluctant to merge the various types of meat mentioned. Reporting the Frequency of Mention (F), Average Index (AI) and Salience (S) for each, these included meat (unspecified, F 15, AI 54 ranking 16th of 49, S 11.1), chicken (F 12, AI 46 ranking 24th, S 12.54), beef (F 9, AI 34 ranking 31st, S 12.94), and pork (F 5, AI 49 ranking 23rd, S 1.51). Had we merged all types of meat into a single code, the total Frequency would have been 41, surpassing *maíz* as the top item by almost double. The separate animal sources of meat were, therefore, retained in the salience analysis to preserve variation in this category. Such high Frequency of Mention for meat (in all its forms) might suggest that meat was

Table 1
Free list data with frequency of mention, average index (order of mention), and Smith's salience.

Spanish term	Approximate meaning	Frequency of mention	Average Index (order of mention)	Smith's salience
maíz	Corn	21	44	21.08
frijoles	Beans	20	83	17.69
carne (no especificado)	Meat (unspecified)	15	54	11.1
sopa de fideo	Soup with pasta	13	70	12.36
chile	Chili	12	79	9.87
carne de pollo	Chicken	12	46	12.54
agua (pura, de fruta, de sabor)	Water (pure, with fruit, flavored)	11	19	13.48
arroz	Rice	10	61	11.23
leche	Milk	9	50	3.57
carne de res	Beef	9	34	12.94
huevos	Eggs	7	57	8.02
carne de puerco	Pork	5	49	1.51
pasta	Pasta	5	66	3.43
lenteja	Lentil	5	54	4.41
calabacitas	Gourds (squash)	5	37	5.72
nopales	Nopal (or prickly pear) cactus	5	69	6.37
refresco	Soda	4	31	0.42
queso (blanco)	Cheese (white)	4	46	2.1
lechuga	Lettuce	4	23	3.85
quelite	Wild greens	4	62	4.76
durazno	Peach	3	17	2.94
zanahoria	Carrots	2	21	0
canela	Cinnamon	2	6	0.12
verduras	Vegetables (unspecified)	2	68	0.15
guayaba	Guava	2	44	0.28
tunas	Prickly pear fruit	2	15	0.45
tomates o jitomates	Tomatoes (various)	2	76	0.6
limón	Lemon	2	33	0.74
aguacates	Avocados	2	8	0.86
pan	Bread	2	42	0.98
mango	Mango	2	50	0.98
garbanzos	Garbanzos	2	65	1.4
frutas	Fruit (unspecified)	2	51	2.52
plátano	Banana	2	55	3.22
coliflor	Cauliflower	2	44	3.59
cerveza	Beer	1	0	0
miel	Honey	1	0	0
café	Coffee	1	13	0.25
vino	Wine	1	13	0.25
pescado	Fish	1	14	0.27
atún	Tuna	1	15	0.29
repollo	Cabbage	1	15	0.29
amaranto	Amaranth	1	29	0.57
chocolate	Chocolate	1	31	0.61
uva	Grapes	1	44	0.86
melón	Melon	1	50	0.98
naranja	Orange	1	50	0.98
aceite	Oil	1	67	1.31
cebollas	Onion	1	69	1.35
avena	Oats	1	73	1.43

consumed frequently. But participant observation made clear that meat was not consumed on a daily basis by most families in El Gusano.

Ethnographic data contribute two additional points. First, a stated goal of this research was to consider the implications of the concept of "traditional food" for public health nutrition and clinical practice. Observations from an afternoon spent with one key informant suggest that clinician conceptions of meat as a "traditional food" may be different from what migrants themselves perceive. These events and paraphrased quotes were recorded in field notes:

> *On March 16, participant observation with Lupe. A doctor's visit at Mount Street Clinic[2]; errands and conversation/preparing dinner for her two sons and their families …. [At the doctor's appointment], the nurse calls Lupe into the exam room. I am introduced, Lupe asks permission for me to attend. No audio-recording. Entire appointment occurs in Spanish.*
>
> *The nurse escorts us to an exam room, chatting warmly about Lupe's family, who I am, and about Guanajuato. The nurse measures Lupe's weight, height, blood pressure, and temperature. Dr. Phillips arrives within a few minutes and greets Lupe with a hug. The doctor spends almost 25 minutes asking Lupe about her general health, health history, family history, her "activity level," diet, and "stress". They discuss one son's infant baby and Lupe's involvement in a diabetes patient support program at this same clinic. They also go over her lab results from the past several weeks, charting progress on weight and glucose. The interview is more thorough than may occur in some settings but I have seen this many times in Mount Street clinic, and with this doctor in particular. Dr. Phillips' Spanish is excellent and she dedicates substantial energy to demonstrating empathy, asking personal questions, and brainstorming with Lupe about these foods. Some of this may be due to my presence, notepad in hand; but the friendliness that Dr.*

[2] All informant, clinician, and clinic names are pseudonyms. This clinic is a specialty clinic that targets Spanish-speaking, uninsured residents in Dallas.

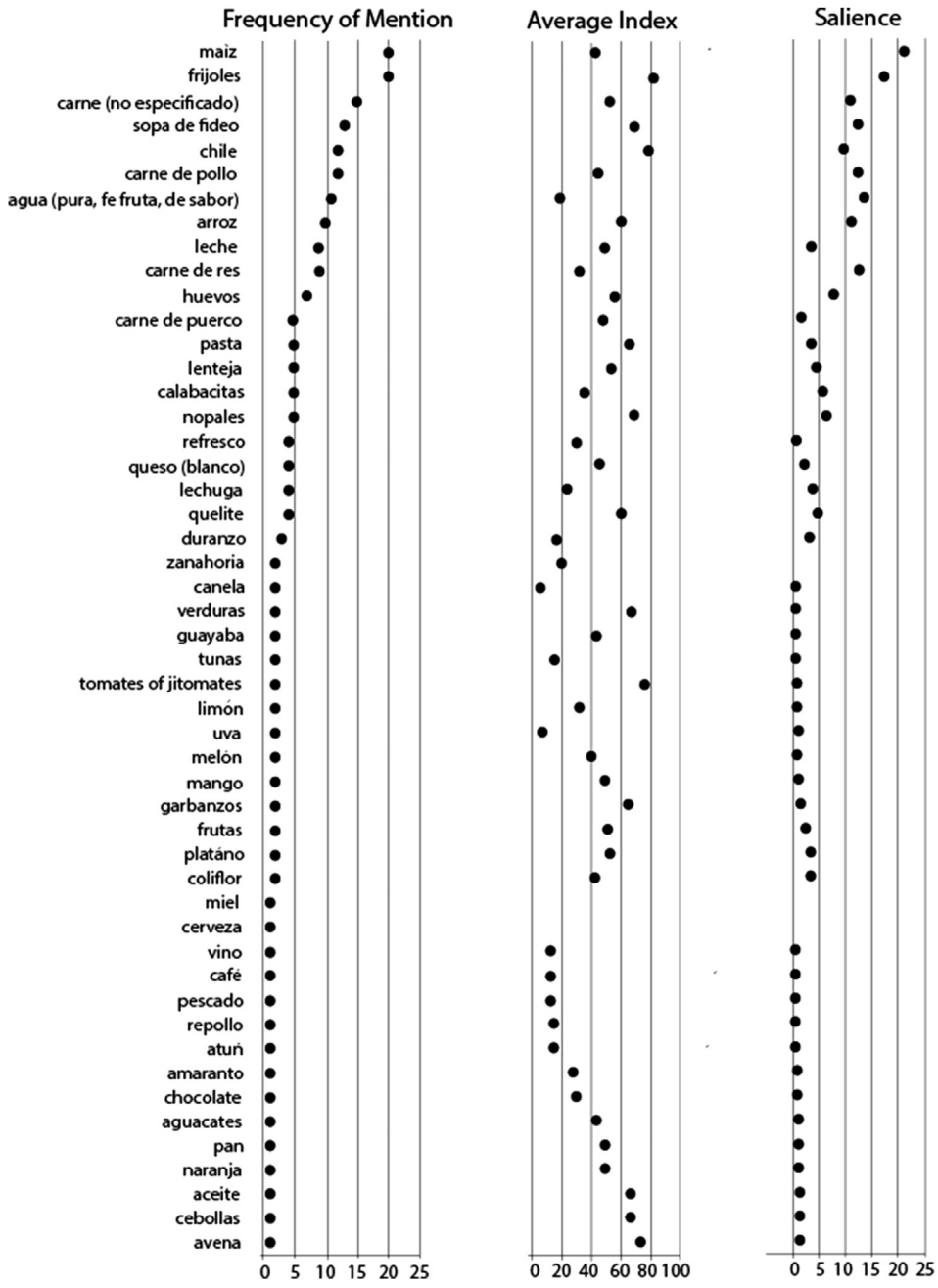

Fig. 1. Dot-plots for free list data with frequency, average index, and salience.

Phillips shares with most patients in the halls and waiting area indicates she is consistently engaged at this deep level.

Dr. Phillips orders blood work and a urine sample and renews Lupe's prescription for Metformin. She reminds Lupe to eat the "traditional foods" she served at home "in Guanajuato" [the home state for many of Dr. Phillips' patients], and encourages her to cook these for her sons. She praises Lupe for cooking "fresh," "home-made" foods, and comments on how "lucky" her sons are that she is there to help them ….

… [On errands after the doctor's appointment] Shopping at Fiesta, we buy … whole pinto beans, vegetable oil, corn tortillas, a bag of pork chops and cuttings, several small chilis ….

Although anecdotal in the current context, these events illustrate a pattern of dietary advice seen in public health and nutrition literature (examples cited earlier), and corroborated by Guarnaccia et al. They found among Oaxacan migrants in New Jersey that while migrants "have more access to food, refrigerators that are fuller, and more meat, such changes are not all positive" (Guarnaccia et al. 2012, 115). They report that informants received instruction from clinicians to return to traditional foods "that the land produces … such as *chípil* and *hierbamora* and *nopales*" (*ibid.*). But in the ecological context of migration, these foods are rarely available and even less often affordable. Lupe's pork purchase was of higher fat content than I ever saw consumed in El Gusano, and she now sometimes fries her store-bought tortillas in oil, rather than toasting them on a griddle (without oil) as she had done in the *rancho*. In the context of migration, where cultural groups of various backgrounds cohere in new ways, advice about a

"traditional diet" is not always clear or practical.

Why, then, would clinicians (like Dr. Phillips) and researchers still use the phrase "traditional food" in imprecise or unrealistic ways? There are several reasons for recommending "traditional food" consumption: to reference a specific historical dietary practice; to convey appreciation or respect for one's past or heritage; or to invoke memories or historical knowledge. Dr. Phillips' intent – evident in the full context of the clinical encounter and her long-term relationship with Lupe as a patient – involved all three. She had discussed the fresh fruits and vegetables of Lupe's Guanajuato home, and encouraged her continued consumption of these foods; she knew Lupe's migration history and its importance to her identity; and she encouraged Lupe's continued memory of and orientation toward the dietary and cultural patterns of her rural background.

In sum, according to the salience analysis, "traditional food" includes meat. But as for Guarnaccia et al., the type of meat purchase in the migration context is different than "traditional" forms in important ways (e.g., fat content). While the phrase may invoke notions of the fresh, lean consumption patterns of agrarian life, use of the term in dietary advice may set up an impossible goal for poor migrants.

4.2. Translating agua, frescas, and refrescos

The second item of note from the salience data was *agua*, literally "water". This item had a fairly high Frequency of Mention (F 11) but was not mentioned early (AI 19 ranking 38th of 49). The term was used to refer to pure water, but also to *aguas frescas*, or flavored waters. *Aguas frescas* are drinks made of water, lemon, and sometimes sugar, and are widely recognized in Mexican dietary literature (e.g., Rivera et al. 2008; Théodore et al. 2011). But it was only through conversation during participant observation that the local shorthand for *aguas frescas* was explained as *"agua"*. Indeed, researchers can sometimes find the same shorthand meaningful and appropriate:

> *Si bien en México se habla de agua "simple," "natural" o "sencilla" para distinguirla de las aguas frescas, en este artículo el término agua se usa sin ningún calificativo.* [While in Mexico we talk about "simple," "natural" or "plain" water to distinguish it from fresh water, in this article the term water is used without any qualification.]
>
> (Théodore et al. 2011, 328)

In the same vein, "*agua*" in my salience analysis captured a variety of drinks.

The terms "*frescas*" and "*frescos*" as descriptors of drinks also required clarification in ethnographic follow-up. "*Frescas*," the feminine form of the adjective for "fresh," is used with "*agua*" (a masculine noun) to indicate flavored waters. And "*frescos*" is used as shorthand for "*refrescos*" which can mean both "refreshments" or carbonated, sugary, often colored soda. In the free listing exercise, these terms had been mixed together and potentially confused with ideas ranging from pure water to non-water drinks including various fruit drinks or sodas, even beer.[3]

Variation in local usages of these terms made a consistent coding of linguistic utterances very difficult. Even Wikipedia (accessed July 31, 2015) reports that in Guatemala and Nicaragua, flavored waters are referred to as *frescos*, short for *refresco* (which in Mexico means sodas). However, in Guatemala, sodas are called *aguas*, short for *aguas gaseosas*, but easily confused in the U.S. (where immigrant populations arrive from all these nations) with the Mexican *aguas frescas* (also called *aguas* for short in Mexico). Our sociolinguistic follow-up with informants teased these usages out, but this technique is time-intensive.

This variation in Latino uses of the terms "*agua*," "*frescas*" and "*refrescos*" may reflect a larger transition in the availability of consumable liquids for rural communities. El Gusano had a *tienda* even before the village had running water, streetlights, or regular teachers and nurses. It is not unlike hundreds of other rural farming communities in Mexico, where Mexican billionaire Carlos Slim now distributes Pepsi products to all the home-front *tiendas* around the country. In these home-front shops are sold not only sodas and other sweetened beverages, but also packaged snacks, white bread, and sugar-topped sweetbreads. The salient "traditional food" *agua* was most likely the local *aguas frescas* or possibly even pure water consumed in El Gusano. The four mentions of *refresco* in the free listing activity were not enough to place that term as a Salient "traditional food". But their anecdotal appearance, and the corresponding variation in local and regional linguistic usage, suggests that even a term like *agua* is not as linguistically straightforward as we might presume.

4.3. Maíz (corn)

Maíz (corn) was the staple grain for every informant and ranks first in the Frequency of Mention (F 21). However, because it was not always listed first, it ranks 26th out of 49 in the Average Index (AI 44). This may indicate a propensity to identify more rare or unique food items first, and to list the ubiquitous items last if at all (Abarca, 2004). Basic food stuffs eaten commonly over generations – the strict meaning of the phrase "tradition" (see Oxford dictionary) – are not necessarily the highly prized over time. The consistently high Frequency of Mention for *maíz* coupled with low Average Index support the interpretation of *maíz* as a basic and constant part of the diet. These scores also inspire initial confidence that, when *maíz* is not listed by informants, it is because it is "invisible" or forgotten rather than truly absent from that informant's diet.

Maíz also illustrates how salience analysis distinguishes between highly memorable, prized, or iconic foods, and those that are ubiquitous and mundane. Fitting argues, "as both a crop and a food for humans, mainly in the from of tortillas, maize is a particularly powerful symbol of the nation in Mexico, with many often contradictory layers of meaning" (Fitting, 2011, 14). These layers of meaning range from the simplicity of indigenous, pre-contact diets (and associated social markers and stigmas attached to indigeneity), to trans-national movements of small-scale farmers against multi-national agricultural corporations. The degree to which any of these referents is in the mind of a free listing interlocutor can only be teased out through qualitative methods and a knowledge of political-economic histories. Fitting's full-length ethnography of maize is a good example of the type of in-depth study that can be made of a single food item with such history and tradition in a given country. It also helps explain why *maiz* would have a Frequency of Mention of 1, but a much lower Average Index in our data.

4.4. Flavor and emotion

Finally, there were several items mentioned consistently early in the free listing activity, but not by many informants. That is, they had a low Frequency of Mention, but a high Average Index. These included *chile* (chili, F 12, AI 79 ranking 2nd, S 9.87), *tomates* (tomatoes, F 2, AI 76 ranking 3rd, S 0.6), *avena* (oats or oatmeal, F 1, AI 73 ranking 4th, S 1.43), and *sopa de fideo o pasta* (pasta soups, F 13, AI 70 ranking 5th, S 12.36). One interpretation of these Average Index scores is that these items were big priorities for some,

[3] One informant listed *cerveza*, beer, as a "*fresco*" along with "*agua*". Conversation yielded clarity around his linguistic shortening of the term "*refresco*" to "*fresco*," meaning a refreshment.

irrelevant to others. They are memorable and important items that carry "traditional" meaning for those who ranked it highly, but do not even come to mind for others.

Mexican *chilis* (including the *Capsicum anuum* or "bell pepper" and smaller varietals like the *serrano* and *jalapeño)* are recognized in the culinary world as a Mexican spice (Katz, 2009). The American tomato is similarly revered as an emblematic food of Central/South America, originally feared as poisonous and later becoming a staple in many "traditional" European dishes (Jenkins, 1948). Oats were listed early, but by only one person. This demonstrates an outlier effect on quantitative metrics, deserving of further explanation if not study. And the fourth item may be more instructive about the domain of "traditional food" for this sample. That item is *sopa de fideo*. I was told by four key informants[4] that *sopa de fideo* is one of children's favorites, and by two more that it is like "mother's chicken soup" to North Americans. These impressions contradict the "universally disliked" *sopas* and *caldos* (stews) of Baer's Sonoran informants (Baer, 1998, 84). Clearly, the listing of this high Average Index item is influenced by an informant's memory and value for something, and may be abhorred by others.

These irregular salience items are not as nutritionally problematic as fatty "meat" and sugary "water". But they are a reminder that, in the domain of "traditional food" and when invoking that term as part of dietary advice, dietary advice can exploit the emotional importance of "tradition". Whether the emotional attachments that migrants feel to particular foods or tastes (Brown, Edwards, & Hartwell, 2010), social factors in shared meals (ibid., see also Smith-Morris et al. 2012), or nostalgia (Brown et al., 2010; Holtzman, 2006; Lupton, 1996; Viladrich & Tagliaferro, 2016), use of the term "traditional food" invokes a memory- and emotion-infused set of foods. Clinicians may use this productively, but only if they are knowledgeable about the patient-specific interpretations and experience these words invoke.[5]

5. Discussion

In the contemporary era, "traditional" foodways are as difficult to identify and quantify as they are to maintain. We have confirmed through salience analysis that a shared concept of "traditional food" exists for this community around corn, beans, and meat. However, ethnographic follow-up revealed nutritionally relevant variation in discussions of meat (i.e., fatty vs. lean) and something as basic as water (i.e., *agua* but also *frescas* and even *refrescos*). These "traditional foods" are created not solely through the mechanisms of time and culture, but through intentional and proprietary acts.[6] These linguistic acts occur in both the community and the clinic, including dietary advice by medical and nutritional professionals and researchers. Fagerli et al. (2005) conducted one of very few studies into immigrant "experience of dietary advice," and found that immigrants struggle not only to understand the meaning of dietary advice, but to implement that advice given current life circumstances. Thus, though they do not problematize the phrase "traditional food," their line of inquiry began an important correction to dietary advice-giving in both clinical and public health settings. My works builds on this sentinel conversation[7] by exposing the unintended and potentially negative nutritional effects of the phrase "traditional food" in dietary advice.

Yet it would be unwise to abandon the term "traditional foods" because it fails to represent a reliable or consistent dietary intake pattern. Instead, researchers can be more precise when speaking of pre- and post-migration dietary patterns (e.g., Wandel et al. 2008) while we reserve the study of "traditional foods" for more holistic approaches that acknowledge the complexity of this phrase. Studies of nutrition which stress the ethnic specificity of "traditional diets" (Franzen & Smith, 2009; Himmelgreen et al. 2007; Perez-Cueto, Verbeke, Lachat, & Marie, 2009) often use inter-disciplinary techniques to achieve both quantitative and qualitative methodological rigor. Salience analysis coupled with ethnographic follow-up, as demonstrated in this research, is one such technique.

Salience is a rapid and simple research methodology that assesses local variation in cultural domains. Salience analysis can also reveal important distinctions and traits within a domain for specific groups (as occurred in this study). But qualitative, ethnographic follow-up on key items in the salience Summary (or any of the four steps of the salience analysis) adds critical detail to these findings, both nutritional and cultural. This research confirmed salience of the term "traditional food" for residents of El Gusano, but also that salience metrics alone cannot capture local meaning. It is therefore clear that salience markers are a useful guide into the more complex (i.e., messy) narratives of dietary change.

6. Limitations

Two limitations in this research deserve mention. First, the sample for this analysis has direct utility for the larger study of which it is a part: a study of migrant foodways in three locations, in or emanating from Guanajuato, Mexico. The results may not be representative for other parts of Mexico or for Mexican immigrants to the U.S. from other regions or urban settings.

Second, ethnographic follow-up on Salience items does not provide a replicable data set, but does indicate a range of linguistic and cultural meanings behind Salient terms in nutritional surveys. Anecdotal evidence in this discussion is made more useful through reference to other studies (ethnographic and others) of Mexican diet and foodways.

7. Conclusion

Given the ethnic and local variation in what constitutes a

[4] A key informant is highly knowledgeable person in a cultural group who has not only the communication/language skills to assist a non-native researcher with all or part of the project, but may also provide social and political access, a unique or important perspective on an issue, or general assistance in the logistics, accuracy, and validity of the research methodology.

[5] For further consideration on this point and beyond the word "traditional," there is informative research on bodily and sensory experiences of food and flavor (Sutton, 2010). Through their pungency and complexity, studies of *sabor* (flavor) give "attention to the bodies of others" (Csordas 1994: 139), capturing "an experience of social sensation" (Perez 2009: 312) not present for all cultural subjects. Food has a significant place in a wealth of anthropological texts on nostalgia, memory, and the timelessness of culture (Holtzman, 2006; Renne, 2016). The relevance of the highly subjective and irregular data on topics like flavor and nostalgia should not be ignored in nutrition science, since these items can have relevance for patients.

[6] Abarca explains how Mexican recipes are gathered for publication from women perceived to embody the traits of Mexican-ness, either in their residence, their ethnicity, or their life story. For women "who fix such meals [o]n an everyday basis, these foods … are rather ubiquitous, …[they] are just doing the ordinary, the mundane" (Abarca, 2004, 21). Yet their work is transformed, through creative research, editing and packaging, into "authentic," "traditional," and "Mexican" food.

[7] Anthropologists, nutrition scientists, and public health professionals have long recognized that migrant foodways are under regular if not constant pressure to change (Lockwood et al. 2015; Grasseni et al. 2014). This is true not only for migrants but for all mobile residents of the post-colonial and diasporic world. Migrant food traditions become the symbols of all that is shared and sustained by a group over time and through trials. The study of "traditional food" is therefore a study not only of long-standing food patterns of a group, but of culturally and bodily salient experiences of consumption, and the iconic and remembered aspects of group identity that so often reside in our regular and prized foods (Holtzman, 2006; Perez, 2009; Stewart, 1988).

"traditional diet", dietary advice to migrants must be both accurate and specific. The challenge of developing culturally appropriate recommendations for specific migrant populations requires careful assessment of these populations (Ayala, et al., 2008; Satia et al. 2000). As Palinkas and Pickwell have argued, the treatment of groups as "traditional" and "non-traditional" oversimplifies acculturation processes, and weakens the applicability of some studies (1995).

The body of research on regional variation in foodways is growing, and remains an essential correction to the over-generalizing pattern of population health studies. This research demonstrates the utility of mixed (qualitative and quantitative) methods for more accurate dietary recommendations for migrants. In-depth research techniques help ensure a cautious application of cultural paradigms like "traditional" and even "ethnic" or "Mexican" foods. More specifically, this research builds on existing calls for methodological and cultural specificity (Fagerli et al., 2005; Neuhouser et al. 2004; Satia-Abouta et al. 2002) by showing: first, that quantitatively salient terms may reflect or contain important variation, even from a single small, rural community; and second, that items of nutritional concern in many modern diets –like consumption of "*refresco*," "*carne*," and "*agua*" – require direct and explicit communication by clinicians to ensure patient-specific understanding.

Migrant dietary change is a highly variable process. In our eagerness to promote healthy dietary choices among migrants, we have sometimes oversimplified notions of change through use of the term "traditional food". This discussion brings evidence of the diversity of that term's meaning, and to the potential confusions over "traditional food" in a sample of Mexican migrants' families. Use of the term "traditional food" in nutritional advice for Mexican migrants may be intended to promote consumption of fresh produce or less meat; but it may also invoke other foods (e.g., meats or corn), inspire more regular consumption of formerly rare foods (e.g., meats, flavored waters), or set up financially impossible goals (e.g., leaner meats than can be afforded). Salience studies with ethnographic follow up in target populations can promote the most useful and accurate terms for dietary advice. For nutritional research to be useful across diverse ethnic and migrating groups, the lucidity and economy of salience and ethnographic tools are well suited.

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