

Citizen Sociolinguistics: A New Media Methodology for Understanding Language and Social Life

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Citizen sociolinguistics is a response to the need for a new sociolinguistic methodology that accounts for and partakes of the social demands and affordances of massive mobility and connectivity in today's world. Drawing from contemporary theories about participatory culture (Jenkins, Purushotma, Wiegel, Clinton, & Robison, 2009), orders of indexicality (Silverstein, 2003), and communicative repertoire (Rymes, 2011), as well as the decades-old tradition of citizen science, Citizen sociolinguistics traces the ways citizens, more so than trained sociolinguists, understand the world of language around them. The goal of this article, and the methodology it proposes, is to document, learn from, and advocate for the importance of this public participation in sociolinguistic inquiry and exploration and its potential to illuminate our contemporary communicative environment.

If you are like many people who read articles like this one, you probably took *The New York Times* Dialect Quiz (Katz & Andrews, 2013) published in December 2013 and circulated widely on Facebook. This quiz features questions like the following:

What do you call a sweetened carbonated beverage?

soda	pop	coke	tonic	soft drink
lemonade	cola	fizzy drink	dope	other

After drawing readers through 25 questions like this, the quiz instantly identifies “where you’re from.” We put this phrase in quotes not only because it is the exact phrase used in the article, but also because many people have a hard time knowing whether “where they’re from” means where they were born, the place they currently live, where they have spent the majority of their life, or perhaps even the region they most identify with. When asked about their thought process as they took the quiz, many people mentioned using, or at least being familiar with, many more than just one of the answers. People who have moved around the United States, listen to the radio, or watch movies or TV (nearly everyone)

had a few options in mind for most of the quiz questions. For example, for the “sweetened beverage,” one of us said “pop,” when growing up in Minnesota, “soda” during college years on the East coast, and then “coke” when living in Georgia. For the “traffic circle” question, another found she uses “rotary” when she gives or gets directions from her family in Massachusetts, but “roundabout” when she’s in Maryland. However, despite this sense of ambiguity, also felt by quiz-takers with whom we’ve spoken, there is no way to pick more than one answer as the quiz is currently presented online.

While the quiz appears to be a simple but fun way to notice paradigmatically local ways of speaking, it also illuminates more complex possibilities for the development of a contemporary new media-based sociolinguistics, or *citizen sociolinguistics*. Since the parameters of the quiz necessarily limit the accuracy of the results, what happened after people finished this quiz is notable. They started fussing with it: taking the quiz from different points of view—themselves as an adult, themselves as a child, or simply picking answers at random to see what would happen. Then, people started talking about it: posting their answers on Facebook and Twitter and discussing them face-to-face. The quiz circulated so rapidly and widely that, even though it was published in late December, it quickly became *The New York Times’s* most visited content of 2013 (*The New York Times*, 2014). People posted thoughtful comments about the accuracies, the inaccuracies, and the problems of place and generalization in this quiz.¹

The vast quantity of talk about the 25-item quiz illuminates something the quiz never intended to show: people have many ways of speaking, and even wider awareness of ways they and other people speak. This is an important—and inadvertent—finding about each contemporary individual’s *communicative repertoire* (Rymes, 2010), and will be discussed with more examples throughout this article. The quiz aftermath also illuminates something about sociolinguistic methodology and social media: as quiz-takers were circulating the quiz, their results, and their ideas about their results, they were sharing information about language and its social meaning. Through their public participation in sociolinguistic exploration, they were being *citizen sociolinguists*: people who use their senses and intelligence to understand the world of language around them. Citizen sociolinguistics, then, is the study of these understandings. Some practitioners of citizen sociolinguistics will be traditional academics who write articles for peer-reviewed journals, and others may be those who are blogging, commenting, or taking dialect quizzes online and talking about them. Any individual, with or without formal sociolinguistic training, who comments on talk or the way people use language can be considered a citizen sociolinguist. We foresee a growing overlap between these two types of citizen sociolinguistic work, and we do not, out of hand (*a priori*), judge either as superior to or more relevant than the other. The goal of this article, and the methodology it proposes, is to point out a new way of collecting and thinking about sociolinguistic data. We discuss the importance of documenting, learning from, and advocating for public participation in sociolinguistic inquiry and exploration, as well as the potential of such public participation to illuminate our contemporary communicative environment.

¹ See, for example, The Atlantic’s (2013) dialect video “Soda vs. Pop vs. Coke: Mapping How Americans Talk” and The New Yorker’s (2014) dialect quiz parody, “What do Y’all, Yinz, and Yix Call Stretchy Office Supplies?”

Rationale: Why Citizen Sociolinguistics?

Why do we need a new methodology for sociolinguistics, and one that focuses on new media and the offhand remarks of laypeople? There are at least three types of reasons for a new citizen sociolinguistics, that is, a sociolinguistics based on public participation: (1) Epistemological reasons, that is, understandings about what is considered to be knowledge and the related issues of authenticity and generalizability; (2) Social Science 2.0 reasons, which address the role of new media in our sociolinguistic pursuits, including issues such as connectivity and participatory culture; and perhaps most importantly, (3) Relevance reasons: the need for a new sociolinguistic methodology that accounts for—and partakes of—the social demands and affordances of massive mobility and connectivity in today’s world.

Epistemological Reasons

For decades, traditional sociolinguists have struggled to find what Labov (1972, p. 85) refers to as “unmonitored” speech samples and then to precisely measure and quantify them in order to make generalizations about regional or demographic varieties. For instance, in his description of the methods used in the sociolinguistic interview, Labov (1972) stresses the importance of going beyond formal speech, stating:

...we must somehow become witnesses to the everyday speech which the informant will use as soon as the door is closed behind us: the style in which he argues with his wife, scolds his children, or passes the time of day with his friends. (p. 85)

This desire for numerically measurable, everyday speech has created a situation with at least two crucial and related epistemological problems. First, an epistemological bias toward what is quantitatively measurable has loaded much of the intellectual work of sociolinguists onto developing precise numerical accounts of sound (or other) distinctions and careful statistical plots of their distributions. While these numbers hold value in terms of making some statistically reliable distinctions between geographical regions of categorical social types, sociolinguists have few methods for making reliable or trustworthy claims addressing the everyday social relevance of these statistical descriptions. Second, the assumption that there exists one single “unmonitored” way of speaking,² such as that imagined by Labov, has limited the material linguists count as useful, leaving much of the potentially most socially relevant material about language and its social value on the cutting room floor. We discuss these two points below.

Inadequacy of quantitative measurement to account for social value

Traditional sociolinguistic research has typically sought to map generalizable processes of sound change and has been largely focused on how phonological and

² The term “unmonitored” (in quotes) is used throughout this article to express what Labov variously terms “spontaneous,” “casual,” or “informal” speech in *Sociolinguistic Patterns* (1972). This type of speech is what Labov imagined as the way that informants spoke when they thought the researcher wasn’t listening, and is a concept that we problematize throughout this article.

lexical items change over time and across regions without addressing speakers' awareness of their own speech. This research tends to present language as an autonomous system that functions largely independently of speakers' awareness or judgments of it. While this work has revealed trends that have been highly influential in the discipline of linguistics and sociolinguistics (e.g., Northern Cities Vowel Shift [Labov, Ash, & Boberg, 2006]), the methodology behind these types of studies does not account for the social value speakers put on these sounds. However, this has not prevented linguists from devising social accounts of the sound regularities they document: in some traditional sociolinguistic reports, statistics and vowel charts seem to dress up intuitive sociolinguistic claims in science-y clothing. While we do not take issue with the original data collected, sometimes, the sociolinguist's intuitive leaps run the risk of putting forth inaccurate and biased descriptions of the social value of certain language varieties.

Moore (2011), for example, in discussing the "sociolinguistic imagination" (p. 44) of linguists in Ireland, juxtaposes the findings of Irish linguist Hickey on accent in Ireland with those of laypeople (non-linguists), including everyday bloggers, print journalists, and even YouTube video-makers. Moore contrasts citizen sociolinguists' descriptions and judgments of the D4 accent (the newfangled "American English"-infused way of speaking, named after a prestigious zip code in Dublin) with Hickey's descriptions (Hickey, 1999, 2000a, 2000b, 2003, 2005a, 2005b, 2007), illustrating how the study of D4 falters at the hands of a traditional sociolinguist in part because talking "like that" is not necessarily something that can be easily measured with the sociolinguist's usual tools. As Moore points out, "D4 is undeniably 'there' as an ideological construct, even if it is very difficult to pin down with any empirical certainty" (2011, p. 44). However, judging by the imitations and mockeries of D4 in newspapers and blogs, there appear to be certain key phrases and pronunciations (e.g., pronouncing TH as a fricative rather than as a stop) that are seen as emblematic of this variety. The crucial methodological point here is that, rather than being a matter of sonically conditioned autonomous vowel shift or some other statistically identified sound shift like "tinker" to "thinker," the perceived presence and use of D4 is a social phenomenon, and should be researched as such. The sociolinguistic significance of D4 is not necessarily in its linguistic description or its role in autonomous vowel shift, but in how its emblematic features are perceived by language users, how they mark people socially, and how their adoption or avoidance foregrounds class divisions. Rather than exploring questions of social value like this one solely through quantifiable, etic descriptions, we need a more nuanced and emic qualitative approach that taps into circulating discourses about language.

Inadequacy of "unmonitored" speech to account for social value

An epistemological problem closely related to the desire for quantifiable descriptions of sounds and their distributions is the traditional sociolinguistic sense that recordings of unmonitored speech are the key to relevant findings. By extension was the conviction that there was not much sense in collecting samples of talk that had been intentionally altered to address researchers. Labov spent many of his own methodological meanderings attempting to figure out how to get unmonitored speech from his research subjects. In *Sociolinguistic Patterns* (1972), he

delights when one of his research subjects takes a phone call during an interview: Labov exits the room but leaves the tape recorder running, serendipitously collecting an unmonitored sample of speech which he uses in later studies to play back to subjects in order to elicit their judgments of a sample of how people talk when they think the researcher not listening.

This notion of the empirical value of unmonitored speech is reproduced in the *New York Times* dialect quiz, perpetuating the idea that an authentic, gut way of speaking actually exists, and that authenticity is objectively identifiable rather than socially-situated. Unfortunately, when we only consider unmonitored speech valuable, we lose track of other important language data—like the talk about talk spawned by the *New York Times* quiz or, in Labov's research, much of his subjects' commentary, which is relegated to folksy footnotes, like the excerpt below:

Many of the subjects were acutely embarrassed by 5; they shifted in their chairs as they listened. They assumed, naturally, that it was a performance done in order for the tape recorder, and for anyone to use this *intimate family style* in such a public situation is clearly *playing "Uncle Tom."* (Labov, *Sociolinguistic Patterns*, 1972, p. 90, emphasis added)

Rather than using such observations as a starting point for further investigations on speakers' perspectives of social meanings, Labov relegates these noticings to footnotes subject only to his own presumptions about what speakers "assumed, naturally." Labov names the variety he has recorded "intimate family style" and imputes this name during an interview: "playing 'Uncle Tom.'" These presumptions do not seem to be gained from talking critically with his research subjects, nor are they arrived at via his careful phonological descriptions. Instead, these comments are removed from his main argument, yet preserved as footnotes because they seem to be drawn using the methodology any layperson might—intuitions about the social value people put on language in different contexts.

Labov's footnotes, like the one cited above, often point to some relevant data about the social value people put on certain ways of speaking. However, due to dominant sociolinguistic epistemologies that view knowledge as emerging out of precise documentation of unmonitored speech and its statistical regularity, they have been left as footnotes, not taken up as the genuine object of inquiry. We are proposing, instead of a methodology centered on casually produced, precisely recorded, and quantitatively measured speech, a new methodology that positions the second order descriptions of language users (like Facebook comments on the *New York Times* quiz, Irish Internet message board contributors, or the comments of Labov's subjects relegated to footnotes) as primary data sources.

Social Science 2.0 Reasons

These days we have new ways of collecting vast swaths of second order impressions of language and its social value, largely via Internet-circulated social media. The Internet not only provides a good source of data, but also fosters social networks and newly diverse communication strategies. People who participate in Internet-based social media have far greater access to these varied communicative forms than those who do not go online or travel at all. As a result, traditional

sociolinguistic methodologies, based on outdated notions of people's (lack of) mobility and language awareness (such as the belief that the ideal informant is a non-mobile, older, rural male [Chambers & Trudgill, 1998]) cannot capture hugely relevant aspects of contemporary communication. As we have already discussed, language surveys, like the *New York Times* quiz, that presuppose singular regional centers for people and their way of speaking do not account for the vast networks of language to which most people are exposed and in which they participate (cf., McGinnis, Goodstein-Stolz, & Costa Saliani, 2007).

In the face of this new virtual (and actual) access to many ways of speaking, Blommaert (2010) has proposed a new sociolinguistics of mobility rather than one of distribution. Following Blommaert's insight, we cannot rely on linguistic atlases that document *a posteriori* the distribution of regional accent variation as a means of understanding the communicative repertoires of highly mobile individuals and/or participants in highly Internet-based communities. Similarly, documentation of face-to-face social networks is not sufficient to understand the power of Internet networks to link disparate voices and create awareness of hitherto unknown varieties of communication. Since much of social life occurs via Internet mediation, a relevant sociolinguistics must be able to account for the effects of this kind of connectivity. Therefore, in what follows, making an analogy to the development of "Web 2.0," we describe "Social Science 2.0," as an angle on sociolinguistics based largely on public participation in language study online, but also building on theories of indexicality that already permeate the field of linguistic anthropology.

What is social science 2.0 and why does it matter?

The term *Web 2.0* refers to Internet technology that allows social sharing of information (DiNucci, 1999; O'Reilly, 2005). This is in contrast to Web 1.0, the original conceptualization of the Web as the information superhighway—a means for storing and sending huge quantities of information—a road to take us into a paperless world, but not necessarily to connect us with one another or develop bottom-up expertise (or what Clay Shirky has called "mass amateurization" [Shirky, 2009]). "Britannica Online" is prototypically Web 1.0, while "Wikipedia" is its Web 2.0 counterpart; a personal website is Web 1.0, a blog (or vlog) is Web 2.0 (O'Reilly, 2005). These contrasts distinguish between the mere depositing of information (1.0) and the sharing, refining, and recirculation of information within a social network (2.0). Since the advent of 2.0 technology and techniques, static repositories of data have come alive, their social relevance affirmed by the manner and quantity of information shared. YouTube, for example was originally envisioned as a simple, 1.0-style repository of video, but the users of YouTube, as Shirikian amateurs (not the professional designers), transformed the site into a form of social media. Now, most YouTubers primarily use the site to share video and to find networks of like-minded video-makers, not simply to store their own personal archives. Indeed, the existence of YouTube and its function as a social network encourages people to create more videos (Burgess & Green, 2009), just as Wikipedia encourages people to add details and new entries and a blog leads to commentary and further response blogging.

Internet networks create orders of indexicality

Through highly connected social networks, Web 2.0 not only facilitates social sharing of information, but also generates social value. When any post receives more comments, shares, and responses, its social value/meaning/relevance increases. When it goes ignored, its value disappears. We use the term “Social Science 2.0” to point to an analogous recognition of social connectivity in social sciences. Just as web postings gain meaning through their role in a social web, ways of dressing, behaving, and speaking (e.g., D4 or Standard American English, Valley Girl, or Hipster) gain meaning through their role in a social milieu. When seeking to understand connections between forms of language and social value, quantitative linguistic information, no matter how precise or detailed, is not meaningful intrinsically, but rather for the role it plays within a social network. Unique regional words and pronunciations can be compiled in linguistic atlases, but individual language users discover the value and social meaning of those features not by consulting that atlas, but by using them and talking (or commenting or blogging or vlogging) about them with other people.

This process of valuation echoes what linguistic anthropologists have termed *orders of indexicality*, patterns of stability in the social valuation of language. As Blommaert (2010) has described them, following Silverstein (2003) and Foucault (2002[1969]), orders of indexicality “operate within large stratified complexes in which some forms of semiosis are systematically perceivable as valuable, others as less valuable and some are not taken into account at all...” (2010, p. 38). How do we know which forms of semiosis are “valuable,” “less valuable” or “not taken into account at all”? We can begin to understand by looking at their positioning in a social network, which is precisely what we are afforded study of through the remarks of citizen sociolinguists. Distinct “forms of semiosis” are discussed by the *New York Times* quiz-takers, commented on by Labov’s subjects, and discussed on D4 Internet discussion boards in Ireland. Orders of indexicality—that is, the relative value of certain ways of speaking—are socially constructed through these types of second order descriptions.

No us and them anymore

As soon as we, the social scientists, recognize our potential role as part of participatory culture—that we are not the sole arbiters of the important information, but that what counts as information is constructed through connectivity and orders of indexicality (Silverstein, 2003)—we no longer need to fool our subjects into being “unmonitored.” This desire to measure “unmonitored” subject behavior implies an outdated distinction between the researcher as expert analyst and the researched as unconscious dope (Garfinkel, 1964). Rather, as John Jackson has written in *Thin Description* (2013), we are all participating in a project together. Presentations of research findings, these days, may be recorded and widely available online, not only to our colleagues but also to our research subjects, especially as the distinction between the field and the lab becomes less clear. An anecdotal aside or Labov-style footnote may now be scrutinized by those whom we are presuming to describe. Participatory culture builds awareness among researchers that our research

subjects may also be our audience, and that our own interpretations are subject to analysis as well.

Such awareness also opens up the possibility to enhance our research not only by forcing recognition of the limitations of our own findings, but also through the knowing participation of those we are studying. As Jackson (2013) points out, Internet networks potentially make us more aware not only of the fact that our subjects may be listening, but also of the selective and limited nature of our own work. We see, by merely a few clicks through the Web, the vast amount of information out there, how many voices contribute to it, and how little of it will actually make it into our final, presumably definitive work. However, this information can contribute to our research, just as our ideas and findings will in turn become part of this web of information. Information is shared, not rarified or restricted to the halls of academe or a special access archive, and the sharedness is precisely what makes information valuable.

This sharedness is becoming increasingly apparent in the hybrid nature of much of the information circulated about language online and via multiple forms of social media. Traditional foci of academic linguists, such as dialect maps, the *caught-cot* and *Mary-merry-marry* mergers, and the linguistic environments of particular allophones resurface in local citizen sociolinguist Sean Monahan's *PhillyTawk* YouTube videos. Twitter posts regularly recirculate results from sociolinguistic research and spark retweeting, discussion, and contention. Blogs about "language bullies" (Malady, 2013) and the distinction between "prescriptive" and "descriptive" approaches to grammar (PBS, 2005) are cited on Reddit, Facebook, Twitter, recirculating—perhaps to the prescriptive language bullies themselves—findings and linguistic theory that used to be restricted to Linguistics majors. This hybridity of information and its circulation—and the potential upending of established indexical orders—is the essence of Social Science 2.0.

Thus, any meaningful sociolinguistics must account for how webs of connectivity make sense of sociolinguistic distinctions and construct new orders of indexicality. No matter how precise our measurements, no matter how "unmonitored" the speech, to understand the relevance of the language that we use, we must shift our concern to how those measurements are valued (discussed, ridiculed, fawned over) within social networks.

Applied Reasons: The Need for a Relevant Contemporary Sociolinguistics

Citizen sociolinguistic methodology both mines and contributes to participatory culture by collecting the second order descriptions of citizen sociolinguists. We are not looking for findings that we can seal away in a vault. We do not want to file our research in a Foucauldian archive of privileged expertise, reproducing that indexical order. Rather, the findings of citizen sociolinguistics contribute to the same participatory culture from which we are gathering data. In the process we recognize both the distinct voices of individuals and how individual voices fit into diverse indexical orders. As Blommaert points out, this might be tricky, as orders of indexicality "are subject to rules of access and regulations as to circulation" (2010, p. 38). However, he does not specify where these rules and regulations come from. We are proposing a citizen sociolinguistics that up-ends established rules of access and "regulations as to circulation" and instead attends to emergent norms

of participatory culture, largely constructed through social media and governed by social media users. This necessitates a methodology that accounts for the diversity of communicative forms—and the uniqueness of each individual’s repertoire—without sociolinguistically imagining a pre-ordained indexical value for them (see Moore, 2011). A relevant and new-media-oriented citizen sociolinguistics builds critical awareness of individuals’ unique communicative repertoires, as well as understandings of the way participatory culture generates and circulates social value of repertoire elements.

Critical awareness of communicative repertoire

This concept of a relevant citizen sociolinguistics is not merely theoretical, but makes sense in increasingly diverse cities, public spaces, neighborhoods, classrooms and workplaces, face-to-face as well as online. A relevant new citizen sociolinguistics must build understandings of language and its social value that address language use in these newly diverse contexts—ideally understandings of communication that further engage people in those contexts. In the last several years, sociolinguists, linguistic anthropologists, linguistic ethnographers, and applied linguists have begun to recognize the need for new ways of describing how people use language, and many terms have been used to describe the way a highly mobile and internet linked society uses language in new ways. Some terms coined to begin to describe diverse communicative practices include *flexible bilingualism* (Blackledge & Creese, 2010), *translanguaging* (García, 2009), *dynamic lingualism* (Flores, 2012), *polylingualism* (Jørgensen, 2008), *crossing* (Rampton, 1995), *truncated language use* (Blommaert, 2008), *contemporary urban vernaculars* (Rampton 2010), and *transidiomatic practices* (Jacquemet, 2005). We use the term *communicative repertoire* to describe the ways people combine not only language, but also other modalities to communicate across a variety of contexts (Rymes, 2011, 2014b). Rather than thinking of there being one unmonitored or where-I’m-from way of talking, *communicative repertoire* (Rymes, 2010) captures the sense that individuals command many ways of speaking and communicating (some of which are not linguistic) and have some conscious command over how they deploy diverse elements of their repertoire. From this perspective, Labov’s subjects who were speaking differently on the phone than in the presence of Labov The Researcher, were not switching to the supposedly real way they talk on the phone nor were they hiding their supposedly real speech from him, but they were selecting from a repertoire of communicative elements according to their different networked social value.

The role of metacommentary

Labov’s subjects were ostensibly making choices about how to talk based on the social value they attribute to different ways of speaking. Our goal is to understand how individuals make these distinctions in any given situation: given the proliferation of exposure to different means of expression (language, accent, word-choice, gestures, clothing, intonation, volume of speech, etc.) as well as the uniqueness of each individual’s repertoire, how do individuals decide which feature of communication is relevant? Rymes (2014a) has pointed to the role of

metacommentary as a way to study which aspects of one's repertoire are relevant in a given interaction. In the methodological shift to citizen sociolinguistics, we propose that an emphasis on metacommentary—or what we have been calling second-order descriptions of emblematic language features—can also build critical awareness of the social value of different elements of any individual's communicative repertoire. Through documentation of and participation in these second-order discussions, citizen sociolinguistic methodology builds (among researchers and researched) *repertoire awareness*. That is, awareness of how different features of an individual's communicative repertoire may function in a given setting, and how individuals account for and inevitably generate new value for repertoire elements.

Critical awareness of the participatory nature of information

While a communicative repertoire is a feature of the individual, how one's individual repertoire is interpreted by others is subject to a social context. Therefore, building *critical repertoire awareness* also requires awareness of the participatory nature of how any individual's repertoire is valued. For example, consider the prototypical sociolinguistic discovery that so-called African American English is an internally consistent grammatical system, just like other forms of English that children grow up speaking, and that, as such, African American children in schools should not be pre-judged as less educated or not as well-spoken as their white middle-class peers (Labov, 1969, 1972; Labov et al., 1968). Despite the academic rigor of this research and its ubiquitous recognition among professional sociolinguists, people in schools continue, nearly 50 years later, to judge children and adults who speak in ways considered to be emblematically Black (e.g., saying "I been seen him" rather than "I saw him [a long time ago]" [Fickett 1972]), to not be well spoken according to the imagined mainstream standard. Somewhat unsurprisingly, considering the limited reach of even the most groundbreaking academic sociolinguistics articles, those educators did not engage with Labov's articles that stated that African American ways of speaking should not be judged as inferior. More precisely, these educators are not part of the social network that has generated the new indexical order that valorizes features of African American English as a legitimate code. As such, many linguistic findings continue to be meaningless in schools and racist judgments about certain ways of speaking persist.

However, while most teachers may not have recognized the social value of certain features of so-called African American ways of speaking, most young people, part of a different social network, recognize a more nuanced view of how different ways of speaking fit into their own and their peers' individual repertoires. This is largely because youth these days have the potential to construct a much wider repertoire than used to be possible. Many White students use emblematic Black speech (Bucholtz, 2011), many Black students use emblematic White speech (Hill, 2009), many English Language Learners adopt non-standard Englishes because they carry more social capital in their school environment or neighborhood (Bashir-Ali, 2006), and many youth might also speak some Spanish, Arabic, Hindi-Urdu, or other language that carries some form of social capital in their school environments (Rymes, 2014a). Students build, valorize, and circulate

these repertoire features through networks of participatory culture—be they hip-hop fans, aspiring finance executives, members of a South Asian dance troupe, or Shakespearean theater geeks. Our methodology accounts for the fact that individuals have many ways of speaking and that these ways of speaking and their social value are built through participatory networks that go far beyond the discrete contextual or regional distinctions accounted for by traditional sociolinguistic methods. A relevant citizen sociolinguistics must account for both the complex communicative repertoire of each individual and for the participatory networks within which that repertoire is cultivated and valued.

Finally, as should now be clear given our participatory perspective, citizen sociolinguistic findings are not to be presented to a group of teachers, a community organization, or the staff of a multinational company over the course of a few hours. Simply presenting findings about language and communication will not help these groups communicate across diversity, because such presentations do not engage participants with the social network within which value is generated. Rather, like other qualitative sociolinguistic research, our approach encourages an ongoing, participatory engagement with repertoire as an essential element of language education. While awareness-raising campaigns intended to combat widespread ignorance serve a needed function, we are proposing something more substantive: a methodology for consistent participation and critical engagement with repertoire diversity and with the social networks that build indexical value of that repertoire.

Citizen Sociolinguistics and a Repertoire Perspective

Up to this point, we have defined citizen sociolinguistics as sociolinguistics based on public participation. We have also spent some pages epistemologically justifying why a citizen sociolinguistics is necessary, and how citizen sociolinguistics accounts both for an individual's unique communicative repertoire as well as how the social-indexical value of that repertoire is largely constructed through participatory culture. It should be clear by now that we are proposing a radical shift in where we seek data, how knowledge is generated and shared, and, ultimately, the goals of accumulating this knowledge. However, this focus on public participation as a way of generating new knowledge has roots in sciences stretching back centuries—and a brief look at this history may clarify some of the categories we will be using to describe our ongoing citizen sociolinguistic data-gathering practices later in the paper.

What is Citizen Science?

Citizen science uses the brain power, time, and know-how of laypeople (not professional scientists) to contribute to scientific research. This practice has been going on for hundreds of years: birds, possums, butterflies, and flowers have been researched by cadres of ordinary people. The citizen science collectivity has often been crucial for giving voice, adding insight, and soliciting wider community engagement in the commitments of more obscure professional scientists or the seemingly random obsessions of individual thinkers. In the early 1800s for example, Henry David Thoreau, in addition to his existential musings, kept

meticulous notes on “first flowering dates, first leaf-out dates, and the first arrival dates of migratory birds in Concord, Massachusetts” (Knight, 2012). Following Thoreau’s model, citizen scientists continued to monitor flowers, plants and birds in Concord, and today this body of information, a longitudinal record begun by Henry David Thoreau nearly 200 years ago and consistently continued by citizen scientists, has been used by contemporary horticulturalists to track climate change and its effects. While the record-keeping by Thoreau began as an idiosyncrasy (and had nothing to do with long-term climate monitoring), its embrace by a line of like-minded citizen horticulturalists turned those idiosyncratic musings into a collective project and led to more broadly useful findings about global warming.

Research on the migration of monarch butterflies tells another story of how an individual obsession developed into collective engagement: the flight patterns of monarch butterflies was an abiding mystery that captivated the mind of Dr. Fred Urquhart who, even as a child, wondered to himself where all the monarchs in Toronto went in the winter. None of the specialists, nor any of the books he consulted, had an answer. Urquhart, who had become a Professor of Zoology at the University of Toronto by the 1930s, devised a way to find an answer: by developing a user-friendly method of tagging monarch butterflies, he was able to enlist the help of thousands of volunteers to help tag the monarch butterflies that they spotted. After nearly 40 years of carefully plotting the paths of monarch butterflies by pinning to a giant map the thousands of labels returned (via U.S. mail) by citizen scientists, Urquhart found an answer to his question: in January 1975, he received a phone call from hikers on Mexico’s Neovolcanic Plateau saying that they had come across millions of monarch butterflies (monarchwatch.org). In 2012, a documentary about his methods and discovery, “Flight of the Butterflies” (Slee 2012), was released to critical acclaim and continues to engage new generations of butterfly enthusiasts. Websites like monarchwatch.org continue his quest not simply to track butterflies, but also to preserve their habitat and facilitate their journey—which modern development has threatened.

While citizen participation in Urquhart’s project ultimately solved his original mystery, citizen engagement also has the potential to upend assumptions that originally prompt investigation. In 2008, professors at the University of South Australia set out to do a large scale study of possum behavior in Australia in order to manage the potential nuisance to people, their homes, their pets, and their gardens. Using some Citizen Science strategies, they solicited surveys from across the country about possums and their behavior, asking laypeople to describe their relationships with possums around them. To the researchers’ surprise, the stories of possums largely featured possums as endearing characters (featuring names like Percy, Mrs. Fatbun, and Jabba the Hutt) whose presence in people’s lives led to dozens of stories about unique and even lovable possum behavior. These observations by ordinary folk were collected into a book, *The Possum-Tail Tree*, and dramatically changed Australian possum management strategy and its public relations approach (Roetman & Daniels, 2009).

All of these projects have drawn on the careful observations and far flung geographical distribution of citizens to compile detailed information that could never be attained by a single professional scientist working solo (or even with a cadre of graduate students). Moreover, consistent with the ideals of participatory culture described above, these three citizen science projects not only depended on

citizens to gather data, but also fostered scientists' engagement with a community that shared their concerns about a particular feature of the environment: plants, flowers, butterflies, possums. In all these projects, laypeople were not only crucial data collectors, but they also played an important role in raising awareness of the scientific object of study and increasing the social value of any scientific or more individualistic findings. Thoreau's notes would be meaningless had they not been taken up by a chain of other citizens concerned with the documentation of Massachusetts flora and fauna. Dr. Urquhart's potentially idiosyncratic and obscure question ("Where do all the butterflies go?") may never have gained recognition were it not for the cadres of everyday people who voluntarily joined in his mission to find the answer—and whose stories make up the now even more widely distributed documentary about monarchs. Similarly, possums in Australia may have never been recognized for their non-nuisancey, endearing status, had the zoologists studying them not included the voices of the citizen scientists. In this sense, we can postulate that even pre-social-media citizen science was a form of what we are now calling participatory culture (Jenkins, et al, 2009) even though these citizen scientists relied on good old-fashioned letter-writing, mailing and collecting of stories, rather than on web-based social networks.

Citizen Science and Web 2.0

More recently, citizen science has joined what we have described here as the "Web 2.0" world. Indeed, Citizen Science might be a major genre included in what has been dubbed "Science 2.0," and the social connectivity of the web has made the connections between scientists and non-scientists even more important than in the days of letters written about butterfly discoveries. As Xue (2014) writes:

The Internet and mobile phones now connect more people than ever before, changing how scientists and citizens interact. Today's Citizen Science is born from and reinforces other shifts in the digital world—"big data," open access, and mobile-phone technology foremost among them—and borrows heavily from aspects of Internet culture: forums, gaming, and social media, to name just a few.

FoldIt illustrates this shift in citizen science to the Web 2.0 world. Using a web-based gaming interface, FoldIt draws on human puzzle-solving to understand how proteins, or chains of amino acids, fold up in the most efficient pattern to become biologically viable entities. Working in teams, FoldIt players take on particular protein folding assignments, looking at 3D models of proteins, and find the most efficient fold pattern. Similarly, Galaxy Zoo (www.galaxyzoo.org), draws on citizen scientists to classify galaxies according to their shape, details, and imperfections. As soon as citizens reach consensus on the shape—when 100% of them agree that a galaxy is spiral, for example—the professional astronomers will use that consensus as justification to apply for expensive, coveted telescope time to explore that galaxy in detail.

FoldIt and Galaxy Zoo illustrate not only that citizen science works well in the Web 2.0 environment, but also that humans have capacities that go beyond computers. Still, while citizens, or non-professionals, may be better at certain problems than specialists or computers, what drives them to do the work of

professionals for free? It seems to be that, as with hobbies like tennis or cooking, intrinsic enjoyment of a certain activity or topic pulls people into citizen science. As Harvard biologist Charles Davis has written about his “Thoreau project,” which tracks the spring flowering times in New England states via the contributions of citizen scientists, “It’s about organisms that people in this area know and love” (Xue, 2014). These citizen scientists, like possum trackers, protein folders, butterfly collectors—and people who took the *New York Times* dialect quiz and shared the results with their friends—know and love their topic, and they are happy to find cadres of people who share their interest, often via the Internet.

The Utility of Citizen Knowledge and Citizen Perspectives

Engaging in citizen science projects not only allows individuals to follow their intrinsic interest, but also to create social-indexical value for that interest through participatory culture. Ideally, citizen science has reciprocal benefits: citizen science brings the passions of previously lone individuals into conversation with professionals and specialists. It also brings potentially ivory-towerish academic knowledge some participatory relevance. We academics all too often find ourselves in an echo chamber, discussing obscure concepts with colleagues who think the same way as we do. As such, and as exemplified by the possum project in Australia, citizen science also requires us to step back and take a good look at the basis of our fundamental assumptions about the subject matter we intend to study, and it generally keeps us honest. Citizen science at its best transforms the arcane, obscure, idiosyncratic, seemingly academic, and possibly even misguided, into a collective project with inherently recognizable social value.

When we talk about the distinction between citizens and laypeople or real world knowledge as opposed to the research results of scientists or the data generated by supercomputers, we are not discussing issues of expertise or intelligence. Instead, we are making a distinction analogous to the Web 1.0 and the Web 2.0 worlds. Citizen science happens in a participatory world. These projects are not simply gathering and storing information (Web 1.0), but creating information and its relevance through new webs of participation (Web 2.0). While some citizen science originates in questions of trained scientists, the knowledge gained citizen science is quintessentially connected to the capacities and participatory culture generated by laypeople. This is not simply free labor—but knowledge and methods that could only be developed by ordinary people, neither disciplinary experts nor computers.

Citizen Sociolinguistics as an Analogue of Citizen Science

Citizen science is the study of the world by the people who live in it and, as such, who have devised ways to understand it that may be more relevant than the ways that supercomputers or even highly-trained academics have developed or have the capacity to carry out. Citizen sociolinguistics by analogy is the study of the world of language and communication by the people who use it and who, as such, have devised ways to understand it that may be more relevant than the ways supercomputers or professional sociolinguistics have developed. What we can

learn from citizen sociolinguistics, which we can learn neither from a disciplinary sociolinguist nor a supercomputer, is the nuanced social value that people put on certain ways of speaking: value that is itself developed through networks of participatory culture.

This citizen perspective translates well to sociolinguistics because, as we have discussed, individuals today have highly diverse communicative repertoires and equally varied webs of connectivity through which those repertoires gain social-indexical value. Just as there are infinite possible types of protein folds, there are infinite functional ways of speaking: what counts as relevant information goes far beyond what a professional linguist might identify as, say, the vowel shift being undergone in Dublin or the Upper Midwest in the United States.

Citizen scientists do not need access to expensive telescopes, and citizen sociolinguists do not need to measure sound distinctions that could only be picked up by instruments in the phonetics lab. Language, and science for that matter, are themselves social acts. Any statement—any second-order description—of the social value of a certain word or pronunciation (according to anyone, regardless of academic expertise) is a potential contribution to the indexical order: the social valuation of that semiotic element within a participatory social web. As a result, citizen sociolinguists generate reams of data, and data about data, and then data about that data. In this way, rather than making frozen statistical generalizations that take attention away from the nuanced act of language use in ever-changing social environments, they both reflect and reproduce the process of social valuation of certain linguistic forms. This process is at least as worthy of sociolinguists' attention as variation in aspiration and vowel height.

Discussion and Implications

Internet technology has opened up a new frontier by providing access to a wealth of second-order sociolinguistic descriptions on the web. However, massive data sets are meaningless unless we think about how to use them and what they mean. Drawing on the citizen science model, we have begun to outline a citizen sociolinguistic methodology to make sense of this data in ways that are relevant to all of us who use language to communicate. As people are generating data, they are also generating new research questions, relevant to their own concerns. If perhaps, we started with the broad question, "what is the social value that people put on certain sounds?" we find—via perusal of participatory culture surrounding accent tags, twitter feeds, Google Poetry, YouTube parodies, and so on—many more research questions (Rymes & Leone, 2014): Who are the people agreeing with these depictions of ways of speaking? How old are they? Where are they from? Would their parents agree? Their grandparents? What extralinguistic features of these performances influence our perception of them? Will they talk the same way in ten years? Twenty? Like citizen science, citizen sociolinguistics does not preordain which of these questions ought to be pursued. Rather, the goal is to see how participants gravitate to certain questions. As such, this is how social value of ways of speaking continuously changes. Following the trail of breadcrumbs left by Internet contributors provides us a methodology for studying a very dynamic and emergent indexical order (see Rymes & Leone, 2014).

By bringing the goals of citizen science to the study of language and communication we avoid old epistemological hobgoblins discussed above: the

fruitless search for “unmonitored” speech, the problem of social media and new mobility, and the disconnect between academic research and ordinary people’s lived experiences. Moreover, engaging citizens—colleagues, friends, students, and family—in this process turns the endeavor into a form of participatory culture that fosters critical repertoire awareness. That is, a new way of thinking about language and the way it functions in our contemporary contexts. By enlisting citizens to circulate and metacomment, citizen sociolinguistics potentially creates greater degrees of repertoire awareness for everyday encounters with diversity.

Conclusion: The Future

We live in a fantastically diverse world, and we traverse myriad communities and ways of speaking over the course of every day. Restricting research to reports that circulate back and forth through a professional community is no longer an ideal. Using the power of Web 2.0 to generate data and participatory engagement, and models of citizen science—rather than entrenched academic orders of indexicality—to create structures for inquiry, we propose to lift sociolinguistics from dusty academe and old arguments and to enter a new world that is continually generating new data, as well as new ways of thinking about it.

We intend for this approach to be deployed not only by academics, but also by teachers, students, and everyday people who like language, and to encourage collaboration between all these social types. These days (or perhaps in any day), limiting one’s register in a given setting to, say, *academic* or *peer group* or *home language* makes no sense. As Angela Creese (2013) has pointed out, immigrant parents (and presumably all parents) and their children are in constant negotiation about how they speak with each other and what certain types of speech convey socially: deciding *a priori* that a certain type of talk is natural at home can only lead to missing most of what goes on in household conversation. Similarly, restricting classroom talk and instruction to a specific repertoire would not only miss much significant talk, but would also be painfully boring and, arguably, unproductive and oppressive. Engaging in citizen sociolinguistics by delving into participatory culture, as well as the new research questions it generates, promises to change sociolinguistic research, classroom interactions and everyday encounters to be more exploratory, creative and non-judgmental.

As academics, we could always go back to valorizing only the quantitative sociolinguistic information published in academic journals, and use the Web as simply a source of raw language data, reserving the place for any second order account for ourselves, the professionals. This could generate comfortable careers, and reams of articles with titles like “The Combative Language of Blogs” or “Discourses of Twitter”—endless collections of language systematized and critiqued on our own scholarly terms. However, this approach misses the Internet’s invitation to look more carefully at second-order descriptions that do not originate from scholars, but from the people using language. It seems irresponsible to treat the Internet as some expanse of “unmonitored” talk for we specialists to name and to put in indexical order. Instead, we have proposed to recognize the value of participatory culture itself as a genuine field of sociolinguistic inquiry. Our quest must be to understand processes of indexical ordering, not to impose our own. Not to do so would be a missed opportunity—and much the Internet’s richness might

fall into the role of a fascinating, yet insignificant, Labovian footnote. We could contribute to this indexical order, where academic portraits of talk on the Internet are valorized as more relevant than the reports of other Internet producers. Or, we could recognize and contribute to new indexical orders generated by citizen sociolinguists and Internet-based participatory culture, reinventing sociolinguistics as a public, participatory discipline.

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