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Jin-Kyu Jung & Ted Hiebert

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Imag(in)ing Everyday Geographies: A case study of Andrew Buckles' *Why Wait*? Project

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Abstract This article introduces an interdisciplinary collaboration that brings together sympathetic trends in qualitative geographic visualization (from the perspective of one author who is a geographer) and contemporary generative artistic practices (from the perspective of the other author, who is an artist and theorist)—attempting to represent a diverse array of creative and multi-modal data through generative and participatory digital methods. We present how this convergence expands categories of meaning, allowing us to explore experiential/embodied as well as creative/imaginative engagements with everyday geographies distinct to a digital age. The article mediates on the idea of mapping the imagination and the ways we imagine quotidian spaces, as well as possibilities for new methods for the analysis and representation of spatial and emotional complexity. We particularly explore strategies of integrating multiple technologies and multiple-modes of representation for mapping and re-mapping complexities of social and creative living in order to help provide alternate ways to imagine, represent and engage different forms of embodied and imaginative geographies. This article presents a case study with the artist Andrew Buckles, in Seattle, Washington, correlating representational and participatory digital data including geospatial, temporal, audio, video as well as electroencephalography readings from brainwave sensors.

Keywords Imagination · Qualitative geovisualization · Everyday geographies · Geography and arts · Interdisciplinary collaboration

Introduction

Imag(in)ing Everyday Geographies is an interdisciplinary collaboration that brings together sympathetic trends in geo-visualization and contemporary visual arts—attempting to map and re-map creative engagements with everyday geographies through a multi-modal digital method. The project applies innovative forms of qualitative geographic information systems (GIS) to data gathered by interviewing artists about the ways they imagine their creative and community practices. The aim of the project is to look at possibilities for new methods for the analysis and representation of spatial and emotional complexity, and the embodied/experiential and creative/imaginative geographies that emerge in the digital age. In this process, we gather digital content of participatory multi-modal data that can be spatially, qualitatively, and creatively mapped, analyzed, and theorized. This article shares preliminary trials and theorizations of the project, seen through an interview with Seattle-

J.-K. Jung (✉) · T. Hiebert
University of Washington Bothell, Bothell, WA, USA
e-mail: jkjung5@uw.edu

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based artist Andrew Buckles[1] that focuses on his current artistic project, titled "Why Wait?".

There are three main goals in this article.

One is to demonstrate the practice and process of interdisciplinary collaboration between the two authors, one of whom is a geographer and the other an artist. We particularly focus on the epistemological and methodological challenges posed by this interdisciplinary collaboration, so that we can bridge across scientific and artistic ways of knowing and knowledge production. In this process, we embrace recursive and iterative engagements without setting up a firm (common) goal. We understand that this makes the process sometimes complicated and contentious but appreciate the possibilities that grow out of these complexities.

The second goal is to demonstrate how a multimodal set of analyses and approaches can provide innovative ways to engage with both experiential and creative digital data, using a series of participant interviews to showcase the complexity of questions of the imagination and imagined everyday spaces. By merging qualitative geovisualization—visualization that preserves and re-presents the contextual meanings and qualitative forms of data with spatial information—with creative artistic approaches, including participatory media, curatorial presentation and digital media criticism, we demonstrate how this new methodological convergence can be potentially applied for the production of meaning, conceptualizing and imagining the types of everyday spaces that people experience in a digital age. In the case of this article the focus will be on artist Andrew Buckles—an interdisciplinary artist from Seattle, who is engaged in a wide range of individual and collaborative practices—featuring selected thoughts he shared in response to our questions about his work, the imagination and his engagement with the community. Our aim was to highlight aspects of the conversation that render creative relationships between forms of data as well as to begin a conversation about how one might approach the examination of forms of imagined and imaginative geographies. This article meditates on methods of mapping the imagination and examining some potential possibilities for carrying out different forms of analysis and representation with the imagination as an object of study.

Building on our methodological focus, the third goal of the article is to make a strong contribution to qualitative GIS methodologies (Cope and Elwood 2009), and to build on existing geohumanities work, that runs counter to traditional GIS, but that seeks to capture the essence of space and a humanistic sense of place and identity (Bodenhamer et al. 2010; Daniels et al. 2011; Dear et al. 2011). We suggest that a consideration of emotional, empathic and imaginative data can offer new possibilities for qualitative geovisual methods. Our approach is one of mixed methods and focuses on interpretive ways of knowing. However, our framework builds beyond traditional ways that social scientists have engaged 'the qualitative', which is usually about meaning and interpretation, with less emphasis on 'emotion' or the 'imagination'—something we are trying to make room for in our work. To do this, we construct a digital archive that can be qualitatively, spatially, and creatively mapped but that is comprised of complementary 'creative' data such as audio, video, pictorial, geospatial as well as electroencephalography (EEG) readings from brainwave sensors. Synthesizing these varied forms of data will provide a greater degree of analytical and representational power to the analysis while allowing us to explore collaborative and participatory mapping strategies. Our data also features digital and media artifacts from the artist's artistic process—autonomous responses to the idea of mapping the imaginary or imagined geographies, that we plan to synthesize and present as "digital portraits" of artistic processes.

An allegory for a hybridized digital/material space

While it may seem like an unconventional way to begin, we would like to introduce this analysis with a story that is particularly relevant to the context in which we situate our work. In 1940 Bioy Casares wrote a novel—*The Invention of Morel*—about a fugitive who was banished to a deserted island on which there was a machine that generated a complete and immersive simulation, one that even included a

[1] We consider Andrew not only as the subject of the research but also as an active co-contributor to the project.

community of people and an environment for them to live in. The strange thing was that, while the prisoner could see the people in the simulation, they could not see or hear him. Now all this might have been fine except that the man fell in love with one of the characters in the simulation, learned her routines, followed her around, cheering her on in the day-to-day life she was leading. While physically alone, in his imagination he stood by her side. But what was unbearable to him was that she had no awareness of him at all. So he set himself the task of inserting himself into the machine-generated reality, to become part of the digital space. He aspired to nothing short of re-mapping the simulation, re-imagining himself and the community so that he could actually belong.

What is at stake in this story is the possibility of interaction and participation in a digital environment. We suggest that *The Invention of Morel* is not simply an anecdote but an allegory for diverse types of real, virtual and imaginary spaces that populate our technological world. We no longer live within a culture reducible to maps, archives and linear forms of interaction but rather a culture where the fate of material space is tied directly to the generative capacity of the technologically-mediated imagination. In fact, some thinkers of digital culture suggest that the situation may well be even more extreme and new forms of technological living actually threaten the human capacity to imagine, generate and interact with traditional forms of geographies. Too immersed in the fascination with mediated living, the fear is that the imagination simply cannot keep up.

This is the fear of digital theorists such as Virilio (1999)—who writes provocatively about the ways in which material space has been flattened by the invention of digital time—or Turkle (2012), who reflects cautiously on the nuanced ways that network cultures bring us into digital proximity while also reinforcing a sense of geographic solitude. Graham and Zook (2013), with the notion of *augmented realities,* also emphasize the indeterminate, unstable, context dependent and multiple realities brought into in time and space of material and virtual experience mediated through technology and digital information. And it is in the shadow of fears of this sort that we identify some of the stakes of the present study—and some of the challenges facing the task of mapping and analyzing the complex ways that technology impacts questions of spatial relations and how we imagine the geographies in which we live.

There are many important societal and scholarly questions being raised in the analyses of a hybridized digital/material reality, and an important dimension of that research agenda lies in developing appropriate methods for understanding and theorizing it. Our project demonstrates an exploratory qualitative geovisualization method for engaging the experiential/embodied and creative/imagined aspects of digital/material/imaginative space, and reflects on some limitations and possibilities of this method. For us, the question of understanding how our everyday spaces can be imagined is one way of mediating the anxiety of cultural and technological shifts. And, for us, the example of *The Invention of Morel* is important because it allows us to insist on the need for inserting ourselves into the dialogue rather that analyzing it only from a distance.

Linking qualitative geovisualization with creative artistic practices

By embracing the complexity of the relationship between material and imagined geographies and digital culture, and by integrating qualitative geovisualization with creative artistic approaches, our hope is to demonstrate new strategies for understanding and representating the meanings of everyday experience. Finding new ways to imagine and re-imagine the digital possibilities for creative and generative living is a multifaceted question that demands a multi-modal approach.

That the question of mapping imagined and imaginative geographies is inherently a *geographic*, is best framed by the early work of John Wright (1947) with the concept of *terrae incognitae*. Wright considered the place of the imagination in geography both as a literal site and as a symbol for all that is geographically unknown. Edward Said (1979), especially in his critique on *Orientalism*, also proposed the notion of what he called "imaginative geography[2]—the invention and construction of a geographical

[2] In the case of *Orientalism* Said's notion of imaginative geography is applied to the term 'Orient.' For Said the Orient is a European invention "the main thing for the European (coming to the Orient) was a European invention representation of the orient and its contemporary fate, in a way to satisfy special western interest through out the last 300 years." (Said 1979, 1).

space." For Said, the term 'imagined' does not mean false or made up, but 'perceived'; it is the perception of space created through certain images, texts, or discourses. In this sense, all spaces may be seen as imagined—there is no 'real' geography to which the imagined ones can be compared. Thus when being 'analyzed' and 'represented', these geographies should not be just 'measured' or 'carbon-copied' for their precision, but de-constructed so that the other interlinked layers embedded in them can be revealed and 'mapped'. The question of how we understand the imagination is thus closely linked to the constitution and conceptualization of experience, and the process of mapping and re-mapping the relationship between the two is essential for an understanding of how they mutually inform and reinforce one another.

There are growing new discourses and practices in the arts and humanities that increasingly incorporate a geographic dimension, and also various ways that geographers are increasingly engaging in artistic and humanistic work. These discourses demonstrate a convergence of 'geography' and 'humanities' and the 'arts' (e.g. hybrid maps of radical cartographers and the artistic creations of landscape) (Aitken and Craine 2005; Bodenhamer et al. 2010; Boschmann and Cubbon 2014; Cosgrove 2008; Daniels et al. 2011; Dear et al. 2011; Elwood 2010; Pink 2012). This emerging trend represents an exciting evolution of ways to merge critical scholarship *with* mapping and geographic visualization that have been challenging the use of maps in non-conventional ways (e.g. feminist GIS, qualitative GIS). Humanistic mapping and value-laden mapping runs counter to traditional GIS, yet nonetheless also seeks to capture the essence of space and a humanistic sense of place and identity. In this context, artistic production and perspective also offer fertile ground for the exploration of geographic perspectives. Ketchum (2011) argues that artistic production allows and even celebrates the artist as the investigator [not just as a research subject] whose experiences embody the act of the investigation. This helps us moving from the Cartesian world of observation to a living-world where the physical is experienced through an embodied sense of being in the world, and then, to move further towards the artistic representation of embodied and imaginative geographies.

The expansion of the practice of geographic visualization to include other 'creative' forms of data can help to represent our lives and experiences better in the mapping process, and has great potential to unearth often hidden and intangible social, cultural, and humanistic relations that constitute the meanings of space we experience. Qualitative GIS attempts to construct GIS platforms that integrate traditional GIS and geographic visualization with qualitative interpretive information as forms of visual, audio, and textual data (Jung and Elwood 2010). It also highlights one important aspect of qualitative geo-visualization, which is the linking of multiple forms of qualitative data with spatial data, along with the consideration of the 'qualitativeness' of geographically visualized data. Qualitative GIS and qualitative geovisualization support the interpretive analysis of qualitative, quantitative, and spatial data. The incorporation of qualitative GIS and qualitative geovisualization with other types of representations coming from the arts and humanities moves us beyond traditional ways that often guide social scientist who engage uniquely with qualitative forms of data. The integration of creative forms of data such as representations of emotion, affect, and the imagination, thus result in a new form of qualitative geovisualization, one related to but not limited by more traditional approaches to data gathering.

As geovisualization grapples with the questions of qualitative data, spatial forms of data, multiple representations, and participatory data, we note that contemporary media arts practice is increasingly focused on amplifying participatory possibilities for community engagement. In this way, Imag(in)ing Everyday Geographies asks a question that is not only geographic, but also *artistic*, since at stake is not just the process of mapping, but of really imagining the ways in which culture and creative possibility impact and intensify one another. Many scholars argue that the participatory trend in the arts is directly related to the ease with which new technologies enable creative production, thus linking the technological emphasis on mapping to emergent forms of creative thinking. One prominent thinker of these trends is Bourriaud (1998) who proposed the idea of "relational aesthetics," a form of artistic practice that uses interpersonal relationships as a medium, extending the idea of network culture into the realm of community engagement. Others thinkers such as Bishop (2006, 2012) and Elkins (2001) have advocated similarly for an increasingly integrated understanding of community and new media, suggesting that the transformative

potential of art is maximized when the boundaries between performance and social context begins to blur. These observations about artistic culture are further reinforced by the large body of scholarship on the social effects of new technologies (for example, Ascott 2007; Hayles 1999; Kroker 2004; Kroker and Kroker 2010; Turkle 1997; Virilio 1997) which uniformly argue that new technologies are transforming the ways in which we live, work, research and play—and how we map our understandings of these activities.

Our project explores new ways to make geographic visualizations and to understand questions of everyday geographies, achieved by fusing a humanistic understanding of place with an artistically-minded approach to data gathering, situating these modes of engagement alongside emergent and established practices in geographic inquiry. By treating the process of data collection, analysis, and representation, as a generative moment, we extend current geovisualization norms while providing a participatory context in which to engage artists while they create content-oriented data. We also unearth often intangible social and cultural relationships that constitute the individualized and personal meanings of the quotidian spaces people experience. In terms of participants, because of the interdisciplinary and artistic/generative nature of the method, we decided to focus on artists as a participant demographic, narrowing our recruitment to individuals from the Seattle arts community whose work has a particular affinity to questions of participatory practice, or who engage in multiple types of individual, collaborative and community-based work. We are particularly interested in artistic/creative engagements with community as a 'site' for developing and testing a methodology for examining geo-imaginaries as they emerge in the hybrid virtual-digital and real-material worlds we live in today. All participants have professional artistic backgrounds, with experience in media-generating environments. To date, we have conducted semi-structured interviews with one participant—a Seattle artist named Andrew Buckles—during which time we recorded video, audio and brainwave data. Figure 1 shows a still image from a silent video portrait taken of the artist while he 'imagined,' a video that is coupled with visualizations of the cognitive data (EEG) generated at the time of imagining. During the interview Buckles was also asked about his own generative processes and artistic activities (e.g. motivation, influences, social and artistic context), as well as how he engages with his everyday spaces and community. He was also asked to comment on the general concept of the imagination, in terms of its relevance to his own artistic practice as well as for the larger ways we are trying to build relationships between the imagination and forms of community engagement. The questions were purposefully open-ended, designed to generate organic conversation around the key themes of artistic practice, community, and the imagination. Other interviews will be forthcoming, with similar questions used for each subsequent participant, customized through dialogue to highlight the unique and generative ways that each of these artists relates to questions of mapping his or her imagined and imaginary everyday geographies. Descriptions of the multiple forms of data gathered from this interview is detailed in the next section.

Mapping complex, creative and imaginary data

To engage the complex matrix of possibilities we want to examine in this project, we have developed a method through which complex forms of spatial, qualitative and creative data can be brought together. The purpose of this approach is to acknowledge in advance the complexity of the mapping process—particularly when examining questions related to subjectivity, emotional response and the imagination. To build a data set that can service both our individual and collaborative goals, it is necessary to differentiate among data "types" and to then examine different ways in which these types of data can be animated and integrated in the mapping process. We see this as a way of respecting interdisciplinary differences in method while at the same time acknowledging the complexity of the "concept" of data that emerges from this type of working relationship. The question of "what counts as data?" is one that is central to our project. Our working answer to this question is to acknowledge that what counts as data depends on what we plan to do with the information we have gathered. Because we plan to do several different things with the data, our interest is in building a digital archive that can allow for complex relationships to form across different types of data and within different registers of analysis (Fig. 2).

Fig. 1 Participant Andrew Buckles "imagining" while wearing the Neurosky MindWave EGG device

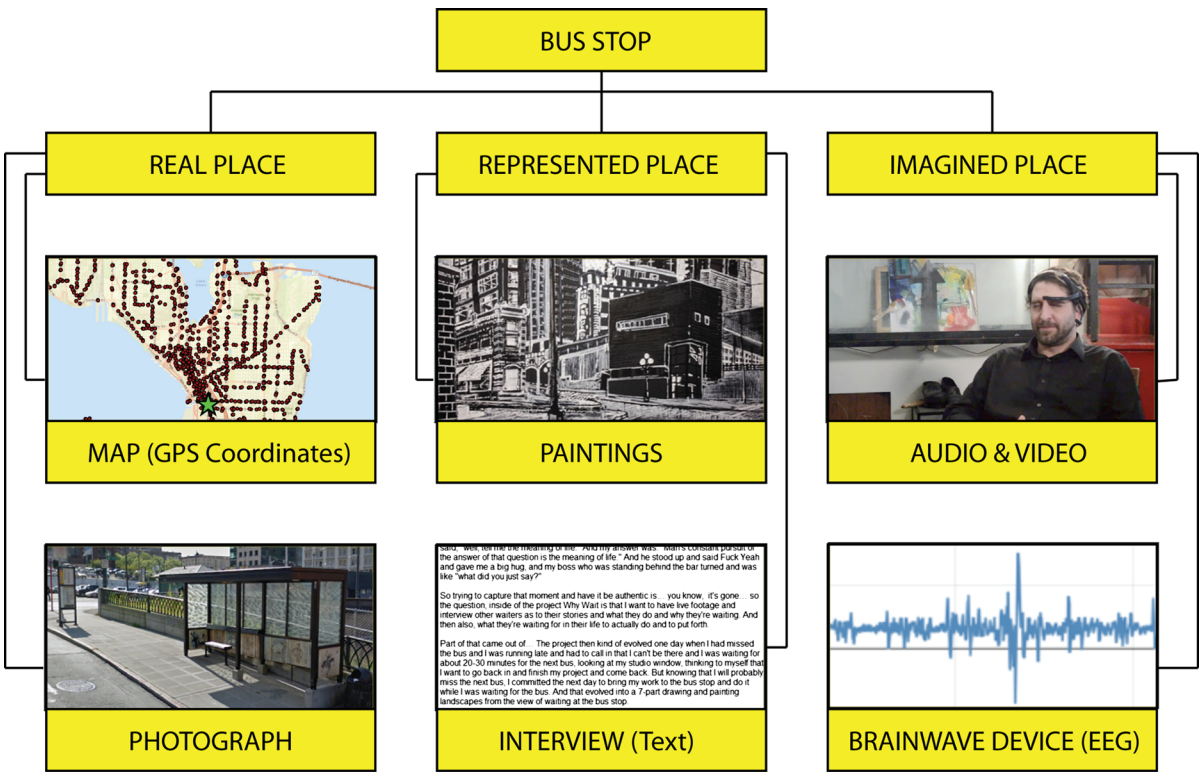

Fig. 2 Multi-modal forms of data

Another way to contextualize this idea would be to refer to a creative experiment conducted by the French novelist Georges Perec in 2010, in which he spent three days sitting at a busy café in Paris making notes about everything that transpired around him. He called this "an attempt at exhausting a place in Paris" by which he meant to raise the question of the limits of description—particularly when seen as a process of data gathering destined for empirical ends. Our project might be seen as proposing something similar, acknowledging the limits of different forms of data but (unlike Perec) gravitating towards multiple forms of input as a way to try and represent a complex constellation of possible interpretations. We identify six forms of data in our project, spanning traditional and unconventional methods of data sourcing across real, represented and imagined geography. We outline those forms of data here, which will be followed by sample analyses to illustrate how we combine and animate this multi-modal perspective. These descriptions reference examples from our interview with Andrew Buckles, but should be taken as indicative of the different registers of data we are gathering for the project.

Map

Our interviews with Andrew Buckles took place at the physical location of his studio and referenced other physical locations that can be identified on a map or by GPS coordinates. The most important of these was a bus stop located just beneath his studio window. The bus stop has a literal geographic location but also takes on metaphorical and imaginative qualities when animated by other forms of data. We include GPS data as a baseline for our archive, grounding the conversation about real and imagined places with reference to standards in the field.

Photographs

Photographs of places marked on a map are an important point of reference for the archive, since they provide a first level of visualization of the data we are discussing. In the context of this project, we consider the photographs to be documentary markers of location rather than interpretive or artistic artifacts. Photographs have been gathered of locations mentioned by Buckles in his interview—including the bus stop that is the anchor for the portion of the conversation we describe in this article.

The goal of this stage of analysis is representative—providing a concise portrait of the interview and the artist's responses, across different forms of qualitative and quantitative data. Then the data is analyzed through various geovisualization tools: traditional desktop GIS programs (e.g. ESRI ArcGIS, ArcScence) and popular geographic webs (e.g. Google Map, Google Earth, OpenStreetMap) in order to map relationships and patterns in the data and provide visualizations of the results.

Paintings

We see paintings as a form of expressive mapping, particularly in the case of the conversation with Andrew Buckles, since his paintings include a highly representational element in which the real locations (as delineated by GPS and photographs) are artistically interpreted. The paintings were done on site at these various locations in Seattle and surrounding area and paintings represent the places from which they are derived as well as more abstract data than is understood by conventional notions of place. Among these more abstract forms of data would be elements such as the emotional relationships the artist has to these places, the ways the marks and styles of painting take on expressive or historical significance, as well as the possibility for a viewer or critic response to the artifacts. We consider these forms of emotional, formal, and interpretive information to be relevant forms of data in a complex process of mapping. We designate them as representational forms of data since they require the articulation of a response based on interpretation of the painted artifacts.

Interview

Over the course of our conversations with Buckles we asked several questions about his artistic process, his creative ideas, and his interpretation of an artist's role in the community. During the course of these conversations many layers of data emerged, some verifiable (such as his place of employment, the locations represented by his paintings, the time he spent waiting for the bus) and some less verifiable (his opinions on the social role of the artist, his metaphors for artistic

practice, and—most importantly—a question that governs much of his creative speculation: the question of "why wait?". More detail on the nuances of this question will be described in "Mapping and imag(in)-ing everyday space: Why Wait?" section but what is important to note here is that we are attentive to the different registers of textual information conveyed during an interview and seek to provide a framework in which to integrate both the verifiable forms of conversation and those less tangible, insofar as Buckles was able to verbally represent them to us in the conversation.

Audio/video

To complement the textual data transcribed from the conversation, audio and video of the interview was gathered, which adds a non-verbal register to the data set. Buckles can be seen to become visibly animated and verbally impassioned when speaking about his paintings, something that adds important emotional and psychological context to the data. He also becomes more pensive and takes more time speaking when reflecting on questions of a more metaphorical nature. While these sorts of non-verbal responses are to some extend predicted by the subject matter, they nevertheless form an emotional component of the conversation that adds conviction to the artist's perspective and consequently also contextualizes the data from the interview as serious reflection rather than idle speculation—important additions that would not be fully represented in the transcription alone.

One additional innovation in this project was a sequel to the conversational interview in which Buckles was asked to simply imagine whatever he liked. There is sound on the video, but there is no speaking—sounds of buses passing underneath his apartment, of his feet shuffling as he adjusts his position, voices from the sidewalk below. On the video we see him concentrate, sometimes blinking slightly or squinting his eyes, other times deep in thought. The video, consequently, is ambiguous as data until seen in the context of the prompt Buckles was given. He was asked to imagine. As a form of data, we (as interpreters of the document) are also forced to imagine what he was imagining. We can make some conjectures about what "might" have been occurring in his mind while he performed this exercise, but any claim would need to come about through our own interpretation of the video. We see this as a form of "imaginary" data—data that is not designed to support a claim but to catalyze a speculative process that purposefully prevents the "exhaustion" of the data set by including data in the analysis that can never be fully resolved.

EEG data

In an attempt to ground speculations about imagined forms of data we asked Buckles to wear an EEG headset while he was being interviewed, and while he was imagining abstractly. The data generated by the EEG headset can be cross-referenced with the interview text and with the non-verbal cues noted in the observation of the video. However, the purpose of this data is not to try and build an exhaustive interpretation but to provide a way to begin connecting the different forms of real, represented and imagined data that we have gathered. The data helps us in our task of imagining what Buckles was imagining, but it does not give us the answer to the question, even in its most quantitative form. For instance, we note a loose correlation between active brainwave states and perceived moments of excitement when Buckles is speaking about his artworks and ideas—and from this we might conjecture that similarly active moments in the silent video represent similarly excited ideas occurring in the artist's mind. However, by making this correlation we have done nothing except note that he appears to be imagining—"what" he is imagining remains unidentified. We articulate a difference between these two modes of apprehension—one "that" he is imagining; the other "what" he is imagining. While correlations among different types of data may provide the basis for the claim "that" he is imagining, the question of "what" he is imagining at that moment is unidentified. We name this unidentified moment as "imaginable" by which we note our intention to include this uncertain variable in our data set, as a form of "imaginary data" alongside more literal forms of data.

To situate this method in the context of established research, we should note that governing the project was an interest in exploring different technological possibilies for experiential, qualitative, as well as imaginative data gathering, with the idea of ensuring our ability to resolve the various data into relevant representations (data portraits) of participants and

their creative activities. We were particularly interested in capturing and visualizing data through various types of digital media and peripherals, including commonly available biofeedback sensors that gather brainwave data. This was in part inspired by other emotional and affective geographic research (Thien 2005), and research that calls for an analysis of the emotive and non-representational aspects of visual representation in/with GIS (Aitken and Craine 2009; Kwan 2007). These recent developments of the concept of geography as more explicitly emotional invite a deeper consideration of emotional life, and demand an engagement with interpretive and methodological frameworks, both in and outside of geography (Thien 2011). For example, Nold (2009) used a technology to measure the electrical resistance of skin, called galvanic skin response (GSR), in order to approximate a range of mental states, along with global positioning systems (GPS) and GIS, for recording visualizing and sharing people's intimate body-state or biometric data. However, while GSR can be effective for charting heightened states of physiological response, it has the limitation of not being able to distinguish between different forms of emotional arousal, for instance: anger, fear, or a startled response. Our solution to this limitation was to find a biosensor that uses EEG, to directly measure and record the electrical activity of the brain, and then using this information to creatively relate to other qualitative forms of data such as interview, videos, and artistic representation of participants. We selected Neurosky's *MindWave Mobile,*[3] which provides research-grade EEG recording designed to interface with mobile and desktop devices.[4]

Mapping and imag(in)ing everyday space: Why Wait?

To provide an empirical example of multi-modal representation and analysis, we introduce key outcomes from our initial work with the artist Andrew Buckles. This article is named with reference to an ongoing project engaged by Buckles, titled *Why Wait?*. The project is an extended meditation on the idea of waiting—in a metaphysical sense of what he is (or others are) waiting for in life; in a literal sense, for example while waiting at an airport or bus stop; and in a labor sense of waiting tables, which is the artist's day job and the way he supports the larger context of his artistic and community activities. The interpretive framing of Buckles work for its complex metaphoric possibilities emerged as central during the interview and emphasizes the need for complex understanding of data when addressing questions of artistic practice and the imagination. While the project takes the form of a series of paintings and videos, it is not reducible to these artifacts, but points to an ongoing thought process and emotional engagement by the artist, both of which are important contextual elements of the work and crucial aspects of the way he imagines his everyday geography.

Buckles is an independent artist who works across a variety of media, engaging his individual work as well as larger community-oriented projects. He is the Director of *Seattle's 30 Day Art Challenge*, a project that brings together large portions of the local artistic community under the umbrella of a challenge where participants are asked to create an artwork a day for 30 days. During the interview, Buckles talked about his own art works including the genesis of *Why Wait?* and the *30 Day Art Challenge* as well as other aspects of his practice as it relates to questions of contemporary art, and how he imagines the everyday spaces to which he belongs. The interview offers us insights into Buckles's imagined geographies and the diverse elements that make up his everyday geographies and his participation. It also adds complexity to our own understanding of everyday geographies and the imagination by proposing other models for consideration, primarily a notion of reflective living built around the various ways of thinking about waiting, with all the idiosyncrasies and personal nuances that an artist is able to bring to the question. 'Waiting' seems an integral part of how Buckles understands the idea of everyday geographies.

According to Buckles, the *Why Wait?* project was born one day when he had missed the bus on his way to work, after spending the morning working on a painting in his studio:

[3] http://store.neurosky.com/products/mindwave-mobile.

[4] Neurosky recently developed a software called MindRDR, an app that allows Google Glass to connect with the Mindwave Mobile EEG biosensor using Bluetooth technology. They claim that it is capable of detecting brain wave and controlling a device just by thinking (Rodriguez 2014).

> I was waiting for about 20 ~ 30 minutes for the next bus, looking at my studio window, thinking to myself that I want to go back in and finish my project and come back. But knowing that I will probably miss the next bus, I committed the next day to bring my work to the bus stop and do it while I was waiting for the bus. And that evolved into a 7-part drawing and painting landscapes from the view of waiting at the bus stop. (Interview, Seattle, January 2014)

The series of paintings that evolved includes views rendered from a variety of locations along bus routes that the artist regularly takes—to and from work as well as to favorite sites in the greater Seattle area. Each painting includes not simply visual information in the form of the artist's rendering of the landscape, but conceptual and emotional importance for the particular affinities these places hold as well as how they fit into the artist's larger conception of using his time "waiting" (whether in fixed locations or while in transit) to produce this series of united works. The paintings are not simply illustrations of the geographic locations but creative portraits and 'maps' that are charged with Buckles' emotional and intellectual relationships to the sites. As artworks these paintings push beyond the representative to bring to life the inner spirit of the place, marking them as transitional and nodal locations in the artist's life. For instance, in the painting featured below (Fig. 3) the exaggerated use of perspective coupled with the methodically drawn shining white lines build an impression of the location that is emotionally explosive, moving well beyond a simple illustration of the place to catalyze the artist's vision of the transformative potential of the space itself. This is not a static site, in other words, but a dynamic location of constant change—while waiting, the nuances of otherwise stable geography thus comes alive with artistic imagination. Importantly, then, the painting represents not simply the location (in this case of downtown Seattle) but an expression of Buckles's response to being (embodied) at that location in an imaginative and thoughtful state of mind.

Also significant to the project is Buckles conception of waiting in a larger context, fusing his regular job as a waiter with a creative process of questioning about the role of waiting in his, and others, lives. For Buckles, the question of what we are waiting for in life

Fig. 3 Andrew Buckles. From the "Why Wait?" series. 2013. Acrylic on canvas

is tied directly to that of meaning, not simply as a process of passive, deferred or wishful thinking, but as a social, personal and metaphysical question that links to even the most casual of conversations. His artistic meditations may begin with his own stories, but he is also equally excited about sharing in the anecdotes and experiences of others. Sometimes this involves an extension of the "Why Wait?" project in which the artist is collecting interviews with other waiters about what it means to them to fill that service role. Other times, it takes the form of recounting conversations he has had—while waiting—guaranteeing that the act of waiting is never, for Buckles, a purely solitary act. Within the interview, he elaborates on several of these sorts of personal moments, for instance with the following segment:

> [O]ne time at work I was waiting…there were several servers on the floor and a pretty impatient boss and this guy was sitting at this 6-top table, by himself, just waiting for his friends to arrive. And everybody else was busy with guests and I had nobody in my section except for this one guy. And so I was talking amongst the other guests, and seating people and my boss was really impatient and like "Andrew why don't you take care of your own tables!" To which I went over to the guy again and said: "I know I've already asked you and I know you've already declined, but my boss is a little impatient right now so at least make it look like I'm helping you make a decision." And he said, "well, tell me the

> meaning of life." And my answer was: "Man's constant pursuit of the answer of that question is the meaning of life." And he stood up and said "Fuck Yeah" and gave me a big hug, and my boss who was standing behind the bar turned and was like "what did you just say?" (Interview, Seattle, January 2014)

The importance of conversation to Buckles' conception of his work is significant, and as a result the narratives he shared during the interview take on added significance to the interpretation of his work—and to the digital archive of artifacts gathered to ground the interpretation. For example, referring Ernest Hemingway's short story, "A Clean Well-lighted Place," Buckles notes that he sees himself in the story of two servers who are having a conversation as a deaf man sits at the bar drinking a nightcap. One server is impatient, interrogating the events and stories of the night until he can finally rush home. The other, older, server is more patient, providing a compelling contrast between different modes of service—and attitudes towards the intricacies of life. That the story of servers waiting, as a patron finished his drinks for the night, unfolds as an extended conversation is also significant, since it reveals Buckles' deep relationship to the question of interaction, moving from labor to community through the interstices of social dialogue. Throughout the years, he has been waiting tables, meeting servers, patrons, artists, musicians, while at the same time engaging these other people in the question of what it means to be waiting—whether as a job or as a vocation or just as a moment of life that might otherwise not be noticed, for reasons that range from compassionate to self-interested to community-motivated. His current vision for the "Why Wait?" project in this larger context is to try and capture some of the richness of these conversations, interviewing other waiters about their stories, what they do and what they are waiting for in their lives. In so doing, his project also begins to extend from being a personal meditation (accompanied by a series of paintings and anecdotes) to a community building practice that reflects on some of the larger social and philosophical nuances of waiting.

What also needs to be reinforced from Buckles' description of the "Why Wait?" project is the breadth and complexity of the questions he conceptualizes, moving between individual and community practices and spaces as well as between artistic, social, humanistic, and philosophical modes of inquiry. While his project engages questions that are abstract, it does so with sensitivity to nuance and particularity that gives it a generative capacity. The project, in this way, is not reducible to the artistic outputs of his individual practice, though that is one important element of the whole. Nor is it possible to simply summarize the conversations with an interview, since the conversations engaged by the artist (including the interview) themselves become part of his generative process of inquiry. In this, there is an insistence on generative engagement that is critical to the representation of "Why Wait?". In many ways this is made even more complex when we acknowledge that the generative capacity of the relationships Buckles discusses are also deeply tied to his own way of understanding the possibilities and complexities of his practice, and the relationship between his practice and the everyday geographies he engages.

The challenge that this poses for Imag(in)ing Everyday Geographies is that our aim is to not only *re*-present but also *represent* the ways in which artists imagine their work and its social place—made much more difficult by the abstract and multi-faceted responses we received from Buckles, and his own creative and complex ways of engaging the questions. In order to map possibilities and analytic trajectories, it thus becomes necessary to try and incorporate some of the artist's complexity into our own ways of thinking about the data gathered over the course of the interview and to come up with strategies for visualizing the different layers of meaning. This is why we think about our project as a sort of "data portrait" (that we animate through conversation) rather than a static database—since any interpretation that is not sympathetic to the multiplicity—even sometimes the paradoxicality—of the artist's perspective would not do justice to the complexity of how he imagines the notion of everyday geography. For instance, when Buckles speaks of waiting for the bus as a generative place, he is also insisting that waiting is not a state of limbo or non-location but exactly the opposite. In a sense, to be waiting for the bus is to be in two places at once. One of these places is the bus stop, but in order to appreciate the complexity of his position, it becomes necessary to overtly acknowledge the part of the relationship that is 'imaginary' or 'imagined'. Buckles

might be imagining his workplace, or making a painting, or contemplating philosophy—but in each instance his way of being at the bus stop is 'qualitatively' different. Imag(in)ing Everyday Geographies attempts to find strategies for speaking about—and representing—these various forms of complexity in relation to people's everyday geographies.

To represent and visualize some of the complexity of Buckles' perspective is to also point out how he imagines his everyday geographies, and how his imaginative perspectives and practices are associated with his perception of everyday spaces he engages. It also prompts 'us' to imagine what or how he is imagining in order to represent his imagined geographies. While the interview took place in the static location of the artist's studio, during the conversation he took us to the streets, bus stops, restaurants, and art events as he explored and shared his imagination of communities. The studio became its own form of bus stop—a complex space from which other imagined forms of engagement unfolded. And in order to re-map the relationships he described it becomes necessary to build relationships among elements of the real and imagined data provided.

Buckles' imagined geographies is, for example, associated with people he encounters: the people he meets on the bus, artist friends, co-workers, people who participate in art festivals, and his neighbors in the studio building where he lives. He also considers the 'imagination' itself to be the single most important element linking his life as an individual to that of his everyday geographies. In other words, for Buckles, everyday geographies and spaces (e.g. art buildings, bars) complement the imagination, as evidenced by the frequency of the association in his descriptions of his artistic practice. Equally, the bus stop is a noticeably important place for the way Buckles imagines his quotidian spaces. For Buckles, a bus stop is not simply a bus stop but also much more. It is a real place, but to reduce the bus stop to a (physical) material location is only to map one state of possible affairs. Instead, in this place many things happen—some built on impatience, others built on the imagination—and they happen differently depending on who is there and who is generating the experience. The bus stop can be a catalyst for building a community because it engenders a space of waiting together. At the same time it can be a space for artistic contemplation, a place where paintings are created that are also of a bus stop and something else. It holds a special meaning not only for an art project like"Why Wait?", but also as a site from which to develop community and to map (or paint) his own conceptualizations of space he explores from the point of each bus stop. The three images represented in Fig. 4 are the Google Street View image of a bus stop where he often waits, coupled with the painting that he made from that particular place, and the location of a particular bus stop on the map (the star symbol on the map). We create these qualitative geovisualization of Buckles' imagined geographies by including the location of important places, such as bus stops, his studio, the site of art festivals, a bar he works as a waiter, along with connected qualitative and artistic artifacts such as art works, narratives, photos, and audio commentary.

Additionally, the brainwave data we gathered and our processes of correlating the brainwave data to different forms of visualization can potentially provide another contextual framework for us to find out Buckles' imagined everyday geographies. One way of doing that is by insisting on a double rendering of the data generated during the interview—a spoken conversation accompanied by an EEG data set that allows us to speculate on the creative relationship between what the artist is saying and what he might be imagining.[5] While our final visualizations and analyses of this data are not yet complete, and ultimately the point is not to try and hold one form of information accountable to the other, our preliminary analysis of the EEG data and the interview focuses on understanding them as co-present, seeking creative relationships between brainwave activity and responses to interview questions. We are particularly focusing on the ways that cognitive data links to 'qualitative' and

[5] Recent neuroscience and cognitive research has increased knowledge about the brain and the electrical signals emitted in the brain, providing a general synopsis of common brainwave frequency ranges correlated to different types of activities in the brain: δ (Delta Waves, 0–3 Hz) for deep, dreamless sleep and unconsciousness; θ (Theta Waves, 4–7 Hz) for creativity, spontaneity, imaginary, and day dream; α (Alpha Waves, 8–12 Hz) for relaxed, tranquil, and conscious moment; β (Beta Waves, 13–30 Hz) for relaxed yet focused, thinking, and aware of self and surroundings; γ (Gamma Waves, 31–50 Hz) for high mental activity and perception and learning. Information about brainwaves types is from the Neurosky Research Tools (http://www.neurosky.com), Brain and Health (http://brainandhealth.com/Brain-Waves.html), and Brainworks (www.brainworksneurotherapu.com).

Fig. 4 Location map of seattle transit bus stop #510 accompanied (above) by a Google street view image and a painting made by the artist at that site

'creative' moments in the interviews—examining key words/codes as well as patterns that may reveal cognitive patterns that shape the artist's notions of community, practice and place. Figure 5 shows a preliminary juxtaposition of the cognitive and qualitative data. It should be noted that the brainwave data[6] changes constantly even when the participant is not speaking, though there are noticeable changes in the patterns registered during the course of the interview. We also observed that the most common brainwave range was the Alpha stage frequency representing more relaxed wakefulness and inner calm (see image B in Fig. 5)—what one might expect from an interview in which the participant was engaged in more creative and imagined tasks than in analytic reasoning. The most dramatic and frequent change of wave interval detected was when Buckles was talking about his *Why Wait* project, in particular, the nuances of

[6] There was a moment when we realized that we are working with a type of Big Data. The Neurosky device records 500 brainwave data points per second. We are consequently dealing with about 1 million points of data for the visualization of a 30-min interview.

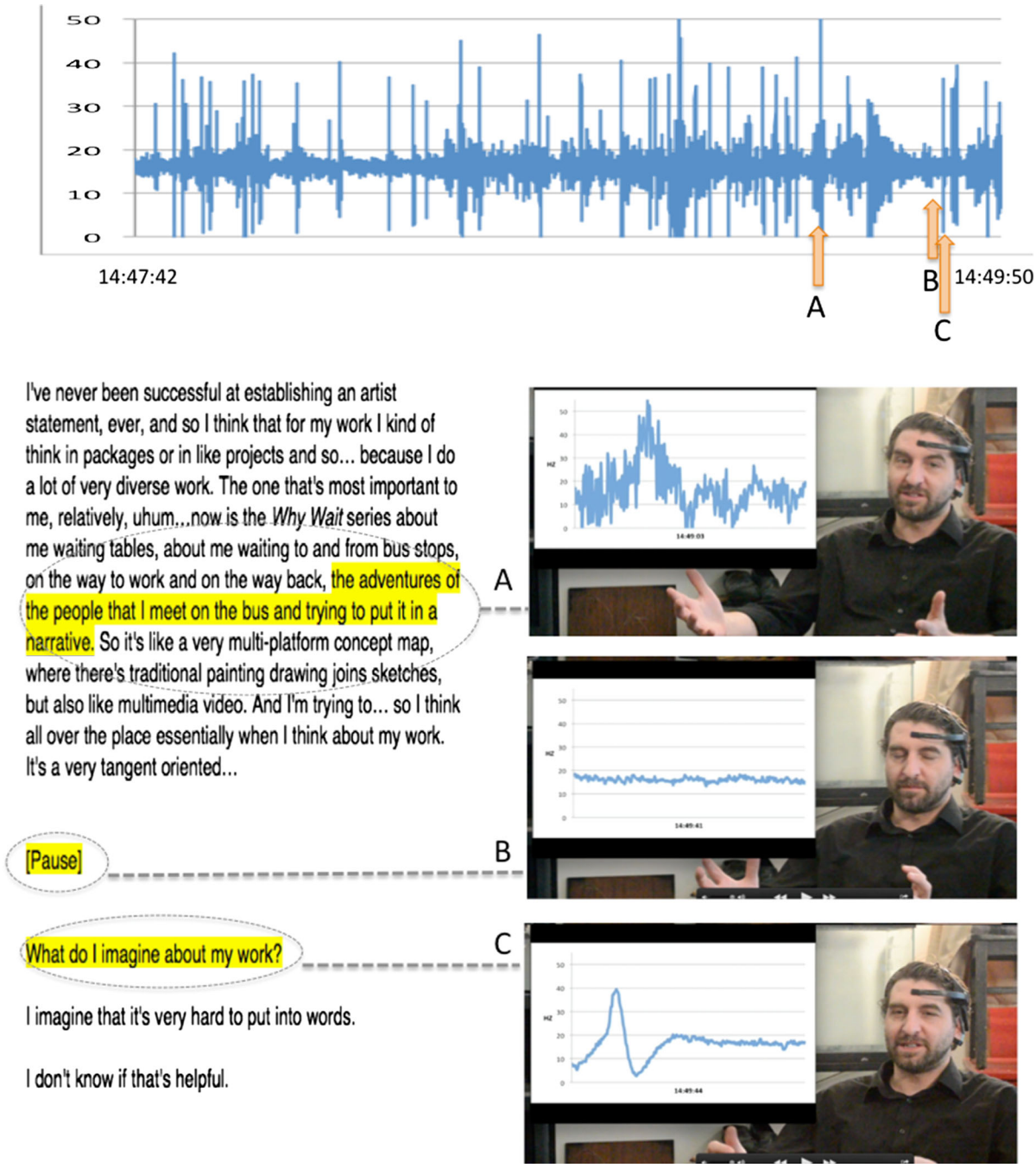

Fig. 5 Creatively relating brainwave data and the interview transcript

'waiting for' and 'riding' the bus (see the narrative linked to Image A in Fig. 5). In this moment of the interview, the brainwave measurements fluctuated more rapidly than usual, oscillating between 5 and 30 Hz much more quickly than during other moments of the conversation. In a preliminary way, one might speculate on a relationship here between moments of creative reflection and the need to vocalize his thoughts, a difference not only in cognitive focus but also in modes of engagement—on one hand focusing

on his own imaginative process, and on the other interacting more directly with the request to articulate his ideas. A similarly complicated brainwave pattern also occurred in the later part of the interview when Buckles spoke about the multi-modal approach he takes to his artistic works, summarizing his creative methods as being, in his words, "all over the place." Other notable moments that remain to be more fully creatively related and theorized happened when he was thinking about the question of the 'imagination,' for instance, how he imagines his work or how he imagines his everyday spaces (see Fig. 5, Image C).[7]

The creative relations that emerge between the brainwave data and the conversation are not meant to be static or explanatory in a causal sense, but suggestive of qualitative and creative linkages between different forms of mapping and how they allow for a more complex understanding of cognitive and imaginative processes. In this sense the linkages are rather involving, though they promise to open up conversations about how different forms of data interrelate and the different ways that disciplinary and interdisciplinary analyses can generate claims to qualitative knowledge. Working against the claims of Baudrillard (1983, p. 12) that simulation [and visualization] "bear no relation to any [pre-existent] reality whatsoever" we contend that the complexity-oriented process we are using allows for a certain generative capacity in the interpretation and creative visualization of the data archives we build. In other words, the synthesis of complex data generates a reality—indeed perhaps also an imagined space—in which both we and Buckles participate. Our visualizations of the imagination and of Buckles' imagined geographies are formed as a framework for contemplation and encounter, formed by compiling images, narratives, emotions, experiences, people, practices, and the imagination, entwined by heterogeneous and miscellaneous relations to particular space, bus stops.

Figure 5 shows one instance of this type of complex visualization—presenting a matrix of visual, textual and brainwave data that can be read together in order to create productive suggestions about the complex ways that everyday geography might be understood. It is worth contextualizing this speculatively, since Buckles is physically located in his Pioneer Square studio, but psychically located at the intersection of different places and ideas under discussion. So, from the beginning, the notion of "everyday geography" represented by this figure is at least 'doubled'—the complexity of the brainwave data being one way to claim that while he is at his studio he is also not there in the same way at the different points mapped by the visualization. At point "A", for example, the brainwave data shows levels of activity and excitement that average out near the higher Beta frequency (often associated with focused or critical thought) but jump quickly between Gamma frequencies (related to learning and acute reflection) and lower Alpha or Theta frequencies (related to creativity and imagination) when describing his "Why Wait?" encounters at the bus stop. The average brainwave frequencies at points "B" and "C" are similar, but the levels of activity are not—leading to the observation that these moments in the interview solicited a more consistent state of mind, focused on thought more than expression. Interestingly, these observations tie to the concepts he is describing as well, for instance—in Buckles's words at point "A" in the interview—his work (like his brainwave patterns) is "all over the place" whereas at points "B" and "C" in the conversation he is more directly thinking about one idea. The exception to this is at point "C" where an interesting fluctuation between Gamma and Theta frequencies occurs just as he imagines the idea of imagining his work (a basic interpretation of the brainwave data suggesting this as also a fluctuation between reflective and imaginative states of mind).

It is important to note that this type of speculative analysis of data is not designed to make formal claims about the contours of everyday geography on a large social scale, but to provide possible ways to describe these sorts of contours on a smaller—local and personal—scale. It is also important to note that this type of analysis contains as much interpretation as it does synthesis, and is designed to map possible ways of understanding and imagining connections among different types of data. In our project, allowing for this kind of complexity is necessary in order to do justice to the nuances and particularities of the participants' voices, with all the incommensurability of individual creative lives and practices. The result of our refusal to simply quantify however is that we also become implicated in the project—our own process of trying to write ourselves into the constellations of reality that

[7] Buckles even changed his posture learning toward the camera when he was asked about this question.

emerge from the conversations. In a sense it's to bring us back to the earlier story by Bioy Casares, not as the engineers of another type of reality machine, but just the opposite—attempting to find strategies for understanding how the complexities of digital reality also provide possibilities for creatively re-imagining the relationships between the imagination and the different forms of everyday geography (technological and otherwise) that are emerging around us.

Conclusions

Collaborative in vision, digital and multi-modal in method, and innovative in design, our project seeks to pioneer new ways of mixing disciplines, devices and discourses in order to explore exciting experiential and creative new forms of engagements with everyday geographies, in particular with geo- or spatial-humanities, qualitative GIS, and geography and arts scholarship. We would like to conclude this article with reflective responses to the three key goals we set out in our introduction.

The first thing we want to raise is that we are trying to hold our own analysis accountable to the propositions of complexity that we are arguing for in the context of this project. To do this we need to explore both the differences and the common currency between artists and geographers. Maintaining a space for these differences is important to the breadth and depth of the collaboration, and we share a resistance to the idea of reducing the project to a set of firm or final conclusions. For us, a lowest common denominator of consensus is much less interesting than what we call "a highest point of interdisciplinary convergence"—a place where innovative geovisualization methods meet the generative and creative engagement of new media artists in attempt to render a holistic map of the links between the imagination and forms of community. We resist the idea that good interdisciplinarity should require strong disciplinary knowledge (Buller 2008, p. 397). Instead, we embrace iterative engagements and the sometimes complicated and contentious process of engaging with different point of views. In an effort to create an interdisciplinary learning and research environment as distinct from multi-disciplinary practices, Burgett et al. (2011, p. 468) argue that "interdisciplinarity is best approached not as a compromise between and among various disciplinary formations, but as a problem of its own." Adopting a perspective of this sort shifts our attention from the kinds of research driven and structured by disciplines to the research questions driving inquiry among inter-disciplines. We propose that the mixed approaches required for robust qualitative and creative geovisual methods can much more effectively be accomplished through interdisciplinary and collaborative approaches.

Another goal of the project is the construction of an exploratory method and a visualization process that potentially helps us to engage in and understanding of the imagination and of imagined geographies. Our project proposes a use of multi-modal sets of data and analyses that can render and represent imagined geographies in a digital form. Engaging with the artist, Andrew Buckles, we recorded qualitative and quantitative data of various sorts: visual documentation of the artist's work; location data that identifies the studio, home and other transitive spaces; and creative data, such as participating artist's own art work and brainwave data gathered through portable EEG sensors. These various forms of embodied as well as imaginative data were gathered, synthesized, and transformed into several different outputs, which then provide a context in which to engage in continuous conversations about the artist participants and their creative works and perspectives. Our project confirms that processes of mapping do not have to be limited to the representation of objective/tangible/visible things, but can present subjective/intangible/invisible/unseen materials (Boyd Davis 2009; Kwan 2007). Nold's (2009) *Emotional Mapping*, Giaccardi and Fogli's (2008) *Affective Geographies*, and *Metacity/Datatown*, published by the Dutch architecture group MVRDV (Costanzo 2006) are important examples that suggest ways that emotion, affect, embodied practice, and art can be crucial elements of geographic research. Our work embraces these sorts of innovative mapping practices by integrating a multiplicity of personal, abstract and numeric forms of data, working, in particular, with creative and imaginative data, in the overlapping and intersecting spaces of geography and the arts.[8]

[8] We acknowledge that the relationship between geography and arts has a long history, and it is epitomized by maps and mapping practice (Cosgrove 2008; Cosgrove and Daniels 1988; Kanarinka 2009; Wright 1947).

The third goal of this project is to contribute to the emerging discussions of qualitative GIS and geohumanities. We extend the core principles and practices of qualitative GIS beyond the technologies of conventional geographic information systems. Our project is innovative for the way it incorporates theories of the imagination into processes of mapping theoretically, and for the methodological focus on incorporating cognitive data into the visualizations. The idea of plotting brainwaves as a series of high and low peaks on the map, and potentially interpolating to create a 3D imaginary surface as a form of qualitative geovisualization and art is exciting. However, more importantly, it provides another way to reveal and represent the perceptions, interpretations, meanings, and imagination that we ascribe to a particular space. We suggest a strategy of integrating multiple technologies, and multiple modes of representation and analysis, such that we can develop stronger insights than what would be possible with more singular approaches.

It's also worth noting (again) that our insistence on multi-modal forms of qualitative geovisualization that are capable of representing complexity also places Imag(in)ing Everyday Geographies in conversation with other interdisciplinary social and political discourses—particularly those that seek to examine and analyze the social implications of emergent forms of media. A couple of importance points of reference include Hayles (1999) proposal of complexity and paradox as hallmarks of posthuman (technological) interaction or Baudrillard's (1983) suggestion that only the imagination can properly render the complexity of digital culture that increasingly defies sensual or static forms of mapping. Or perhaps most recently Arthur and Marilouise Kroker's (2010) insistence on the tension between embodiment and critical thinking as that which best allows us to align ourselves with the deeply unpredictable drifts of evolving technological culture. In this, we look to explore strategies for mapping and visualizing complexities of social and creative living in order to help provide alternate ways to imagine, represent and engage the different forms of emergent community particular to the twenty-first century. This will also extend the emerging engagement and discussions of spatially-integrated forms of social science, humanities and the arts as well (Goodchild and Janelle 2010; Hawkins 2012, 2013; Sui 2010). We introduce an innovative method that allows us a way to systematically develop insight into the *process* of geohumanitic ways of knowing and engaging the world. Because much of the existing literature in geohumanities has been focused on ways to analyze pre-existing artifacts or texts (e.g. 'Humanities GIS' by Harris et al. 2011 and most historical projects in Bodenhamer et al. 2010) our approach complements and extends these existing practices.

The collaboration with contemporary artists challenges the traditional boundaries of geovisualization and provides an exciting opportunity for engaging creative content. By treating the process of data gathering as a complex and generative moment, the preliminary result of our project helps us re-consider the relationship between geography and arts, and, in particular, helps us to appreciate the possibilities of artistic perspective for a geographer's practice of critical thinking and engagement.

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