

**The Wikipedia Global Consciousness Index: A Measurement
of Awareness and Meaning of the World as One Place**

Abstract

To supplement current globalization indexes, I propose a new index, the Wikipedia Global Consciousness Index (WikiGCI). The WikiGCI, defined as a measure of the awareness and meaning of the world as one place, is founded on Robertson's (1992) suggestion of global consciousness. Available indexes that measure globalization rely on network definitions for their theoretical frameworks and count objects crossing borders. For the WikiGCI, ideas serve as the empirical units to understand global consciousness (Steger & James, 2019). The WikiGCI is based on articles edited in Wikipedia that express ideas on a world level. By geolocating IP address edits to Wikipedia articles, I identified the top 100 articles edited in the most countries (global articles). With this research, I first analyze how global articles affirm a global consciousness in Wikipedia as well as define its meaning. Second, I construct an index of this consciousness and measure each country's score on it.

Keywords: globalization, indexes, Wikipedia, global consciousness, networks

INTRODUCTION

With the dramatic increase in the interconnectivity of places on the world level since the beginning of the new millennium, scholars have constructed indexes to measure the impact of globalization (Gygli, Haelg, Sturm, 2018; The Globalization Index, 2007; Figge & Martens, 2014; Vujakovic, 2009; Lockwood & Redoano, 2005; Kluver and Fu, 2004). Many have argued that the most productive method of understanding globalization is to comprehend its process - networks and flows (Appadurai, 1996; Castells, 1996 & 1997; Latour, 2005a & 2005b; Sassen, 2002). Most globalization indexes, such as the KOF Index of Globalization, are theoretically founded on flows and networks and base their measurements on counting objects such as tourists or consumer goods in flows across borders. While this enumeration provides understanding of the process of connecting places in the world, it often leaves the meaning of living in one world unexplored.

By utilizing Robertson's (1992) premise of global consciousness, this paper proposes a new index, the Wikipedia Global Consciousness Index (WikiGCI), which measures the awareness and meaning given to the world as one place. This new index represents living in one world by shifting the theoretical focus from material networks to global social meaning. The WikiGCI employs global-level ideas as the units of measurement by geolocating the top 100 articles edited in the most countries in the world in Wikipedia.

These data offer a unique opportunity to analyze meaning on a global level. There are two main research aims to this paper. My first goal is to examine how global ideas in Wikipedia articles edited in the most countries (global articles) affirm a global consciousness by reflecting meaning and awareness of the world as one place. By discussing ideas on a worldwide level, these global articles develop our understanding of how people experience the world as one and global social meaning (Steger & James, 2019). Second, I construct an index to measure country-level participation in global consciousness. This new index contributes to the collection of globalization indexes by measuring and mapping regional participation in discussing global ideas.

This article first discusses globalization as a process of connectivity and its corresponding measurements. Global consciousness theories are analyzed to argue for a new index that captures a sense of one place in the world. Second, the methodology section outlines the Wikipedia data and how I mined them to produce the WikiGCI. Third, I present the results of establishing the index and analyzing the global articles. Finally, I conclude with a discussion of the relevance of this research.

Globalization Indexes

Indexes are based on theory. There are three essential components to creating indexes: 1) theory, 2) dimensions and 3) unit of analysis (Babbie, 2012). Many theorists frame globalization as networks and flows, which lay the foundation of contemporary indexes (Appadurai, 1996; Castells, 1996 & 1997; Latour, 2005a & 2005b; Sassen, 2002). Globalization is supported by networks, defined as a “particular kind of spatial arrangement that consists of a collection of linked elements” (Johnston, 2009, p. 498). This type of network reasoning concentrates on globalization as a process of objects crossing borders at the country level. They emphasize the structure of the process, not global social meaning.

Theoretical frameworks of flows and networks establish the basis for the leading globalization indexes (Gygli, Haelg, Sturm, 2018; The Globalization Index, 2007; Figge & Martens, 2014; Vujakovic, 2009; Lockwood & Redoano, 2005). The KOF¹ Index of Globalization, for example, is issued yearly by a Swiss think tank, ETH Zurich, and is one of the most cited indexes in the study of globalization (Casseli, 2012). It defines globalization as “creating networks of connections among actors at intra- or multi-continental distances, mediated through a variety of flows” (Gygli et al, 2018, p. 5). The three dimensions of this index are economic, political and social. These dimensions operationalize their constructs by measuring flows. The economic dimension, for instance, counts trade and financial flows (e.g., inflows and outflows of foreign direct investment (FDI) as a percent of the GDP). The social dimension counts cultural and informational flows (e.g., international trade in cultural goods as percent of population, migration and number of Internet users per 1000). The political dimension captures flows by measuring the political interactions of governments in the world (e.g., personnel contribute to United Nations Security Council missions as percent of population). These dimensions measure the intensity of interacting in global networks at a country level. They are usually calculated in proportion to the population with no minimum participation required.

This dependence on flows and networks as frameworks to comprehend globalization successfully examines the process and structure of interconnecting places, while continuing to leave unexamined global social meaning. The KOF Index, for example, provides summary statistics of films that are traded across borders, but does not explicitly indicate their type (e.g., American or action) or how the movies are experienced (e.g., criticized because of content). Political dimensions are also constrained by a structural approach. While the KOF counts the number of embassies operating in different countries, it does not include any issues (e.g., trade disputes) that are salient to the world. Present indexes also limit the subject

¹ KOF is the German acronym for "Konjunkturforschungsstelle" (Economic cycle research institute).

matter under investigation by establishing a priori categories. However, the WikiGCI sets no categories and permits latitude for Wikipedia editors worldwide to edit any article deemed important. By analyzing Wikipedia articles that are edited in the most countries, the WikiGCI's flexibility captures a bottom-up construction of ideas that are significant at a global level that none of the predefined indexes can.

Global Consciousness

The heavy reliance on material networks and flows in understanding globalization and its measurement is not without its critics. Instead of viewing globalization solely as a process, scholars have also called for the consideration of the condition of the world as one place (Robertson, 1992, 2011; Giddens, 1991; Sklair, 1999, Steger & James, 2019; Martens, Caselli, De Lombaerde, Figge, & Scholte, 2015). It is necessary to analyze and measure the awareness of the wholeness of the world, or global consciousness.

Robertson (1992, 2009, 2011), a critic of globalization theories that exclusively center on networks, argued that research ought to investigate not only connectivity, but also the scope of global consciousness. He argued for more consideration of this feature of the human condition, which he defined as "consciousness of the concrete world as a whole" (2009, p. 121). This global consciousness is the awareness and meaning given to the world as one place. It is a reflexive state where we are aware of being a part of one "worldness." Robertson (1994) demonstrated how ideas and conversations could play a crucial role in coalescing an understanding. He highlighted how the discussion of "global warming, the extinction of many species of animals, the alarming spread of AIDS, or the expansion of various means of mass destruction makes us increasingly conscious of *the world* as a whole" (p. 129). Ideas provide a cognizance of being part of the oneness of the world because these ideas influence us as well as the rest of the planet.

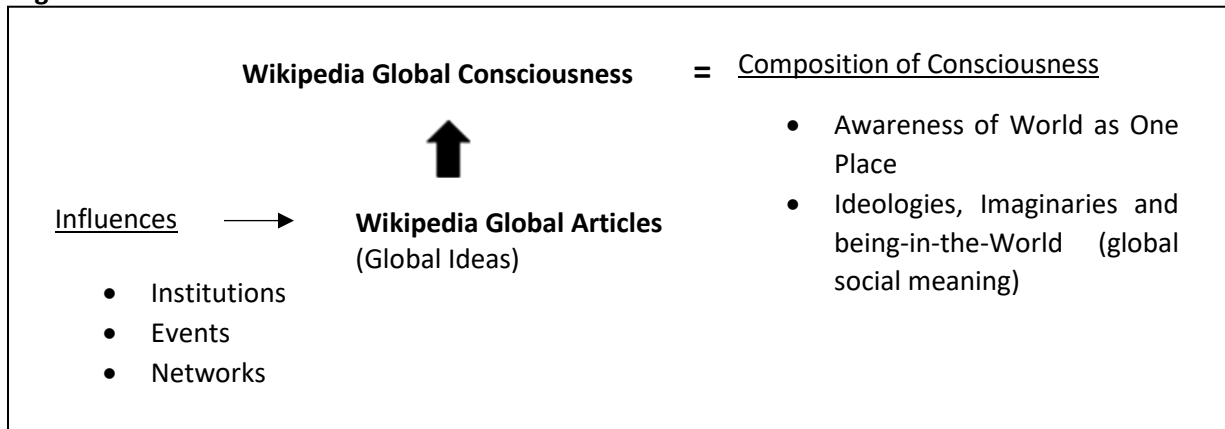
To analyze global consciousness, Steger and James (2013, 2019; James and Steger, 2016) argued that ideas are the first of four levels of global social meaning with which to analyze the lived meanings of one world. At this empirical level of analysis, individuals utter ideas (e.g., global market), which become units of analysis. Events, networks and institutions shape ideas. The second level, ideologies, is imbued with power relations. At this level, ideas are patterned clusters of normativity. For example, neo-liberals use ideas such as increased production to argue for unfettered global markets. The third level, imaginaries, evokes a social whole. At this level, ideologies are embedded in the common sense of place or time that provide discursive power for ideologies. For many, the imaginary of a global market has taken on a common sense of inevitability in an ever-interconnecting world. The fourth level is an understanding of "categories of being-in-the-world" (Steger & James, 2019, p. 97). The researcher can analyze categories of human existence composed of temporality, spatiality, corporeality and performativity. For example, being-in-the-world associated with global markets is a spatiality of open borders. Beings-in-the-world can be categorized more abstractly, such as modernity (e.g., linear time and technology) and traditionalism (e.g., religious cosmology). Each successive analytical level permits a more durable understanding of global human existence.

Narratives, such as those in Wikipedia articles, can contain ideologies, imaginaries and beings-in-the-world that construct the meaning of the world. Ideologies and imaginaries become part of the "discursive networks enveloping our planet" (Steger & James, 2013, pg. 20). Composed of sets of texts, speeches and images, discourses produce understandings of the world that compose Wikipedia articles. People in different places in the world can use ideas to dispute various ideologies, imaginaries and beings-in-the-world that create global social meaning. For example, populists and neo-liberals disagree about the meaning of global markets. Ideological clashes over ideas such as free trade shape the way one thinks of the meaning of the world. While some global ideas are not exceptionally controversial, disputes

concerning other global ideas provide an effective means to track contradictory and changing social meaning that comprise the evolving global consciousness.

To analyze global consciousness (Robertson, 1992), I construct the Wikipedia Global Consciousness Index (WikiGCI) that represents awareness of the world as one place and global social meaning. As seen in Figure 1 (See below), socio-economic factors with world relevance, such as events (e.g., terrorist attacks), institutions (e.g., powerful media outlets) and networks (e.g. trade), influence the construction of global ideas. The worldwide power of these factors facilitate ideas to become global. Wikipedia global articles are global ideas in the form of Wikipedia articles edited in the most countries in the world. These articles form the base of the Wikipedia Global Consciousness. The articles' narratives express an awareness of the world as one place and global social meaning, both of which discursively compose the Wikipedia Global Consciousness. For this research, I analyze the global articles to give insight to the Global Consciousness and its composition.

Figure 1. WikiGCI Structure



METHODOLOGY

Wikipedia as Dataset

Wikipedia, the online, multilingual, free-content encyclopedia (Han, 2011), offers a unique database with which to analyze ideas on a global level. Volunteer editors called Wikipedians collaboratively write all its content. There are no requirements to become an editor. It is a forum for individuals from all countries to create and edit knowledge. The encyclopedia declared its mission “to benefit readers by acting as an encyclopedia, a comprehensive written compendium that contains information on all branches of knowledge” (Wikipedia contributors, 2014). Volunteers are encouraged to post all forms of encyclopedic information in an international, cooperative effort. With over 146 million edits performed to Wikipedia’s content in 2016 worldwide, this online encyclopedia is one of the most expansive forums available to gauge global knowledge creation that is produced in a bottom-up structure.

Although editing in Wikipedia does not necessarily reflect the consensus of a country’s entire population, it does represent the ideational form of global consciousness of Wikipedians in every country. By focusing on online edits, the index gauges not only the same forum of knowledge production globally, but also the global consciousness in one of the most used forms of interconnectivity in the world (i.e., the Internet). Utilizing communication technology to construct globalization indexes is not unusual. For example, the KOF Index of Globalization applies Internet indicators in its index. Due to its immense international popularity as an encyclopedia (Zache, 2017), Wikipedia’s articles can serve as one indicator for global ideas.

Wikipedia’s structure of linking articles in different languages based on similar concepts, or interlanguage links, offers the opportunity to construct an index representing the social meaning of one world. The articles across languages are linked by the title, so *Love* in English is connected to *Liebe* in German, *Amour* in French, and so on (Wikipedia contributors, 2017). Wikipedians and software called bots perform this standardization of concepts at the title level of the articles. The titles are therefore interlanguage linked among the different language versions of Wikipedia (simply called Wikipedias) if the concept exists in other language Wikipedias.

Geolocation of the country location of the IP addresses performing edits provided the most advantageous method to map active knowledge creation during the research period. Other possible analytics, such as counting interlanguage links per title, does not reflect active knowledge creation in a country during a specific time. Counting edits performed by registered users with profiles is limited because these users are not required to display their locations. On the other hand, articles in all languages can be edited by unregistered users, which displays their IP addresses. Geolocation of IP edits provides the time and location of the edits. It offers the additional advantage of comparing editing by country with globalization indexes that employ the same geography, e.g., the KOF Index, to understand if connectivity increases global consciousness.

However, there are limitations to analyzing IP addresses. There are no publically available data stating the exact numbers of unregistered compared to registered editors per country. The number of edits performed by IP addresses is counted by language, from 4% (Slovenian) to 37% (Japanese) (Yasseri, Sumi, Kertesz, 2012). In addition, IP addresses may not directly correspond to individual Wikipedians because IPs can be shared within a household or dynamically allocated to a computer. I analyze the results bearing these potential over- and underrepresentations in mind.

Governments worldwide rarely censor Wikipedia, but censorship can also be considered part of the global consciousness. As of June 2016, investigations (Clark, Faris & Jones, 2017; Wikipedia contributors, 2020) discovered China restricted access to the Chinese Wikipedia, but did not block other language versions. Uzbekistan and Thailand also intermittently blocked the Uzbek and Yiddish Wikipedias, respectively. However, the investigations indicated that globally there was relatively little censorship of the encyclopedia. This suppression of editing is considered part of the Wikipedia Global Consciousness. China's one party state, for example, establishes for its population the meaning of the world according to national ideology, which is reflected in the suppression of edits as represented in the WikiGCI. Furthermore, Miller (2019) reported how Wikipedians controlled governmental attempts to manipulate

content by deleting questionably edited material or locking the articles to IP editing. Wikipedians decide how to manage government interference with articles.

Data Mining

The data mining was performed in both Python 3.6 and MySQL Workbench 8, a programming language and database management system commonly employed in data mining. Titles for the Wikipedia articles on which one or more unique IP addresses performed edits were downloaded from 270 active Wikipedias of living languages via the publicly available Wikipedia cloud services (https://meta.wikimedia.org/wiki/Research:Labs2/Getting_started_with_Toolforge). Because the volume of data generated in Wikipedia is computationally demanding, I analyzed IP edits performed from October to December 2016². This three-month period proved to be sufficient to analyze global consciousness expressed in the articles. IP addresses were geolocated applying a lookup table provided by Maxmind, a digital mapping company, as per the work of Graham, Straumann and Hogan (2015).

Proxy server IPs that can mask true country locations of the editors were excluded from analysis. Proxies are used for various reasons, from filtering content at work or school to providing privacy online (Wikipedia contributors, 2020). Internet users often utilize proxy IPs indicating the same country as the user, but sometimes they obtain IPs located in different countries. Although proxy IP address repositories cannot maintain historical data for legal reasons, current IPs can be used to identify prior IP locations with high accuracy (personal communication with representative of <https://www.ipqualityscore.com/>). There is a 90-95% accuracy rate in geolocating 2016 IPs with high probability of masking the true country location using a database of proxy IP addresses from 2020 because most ranges of IP addresses remain static over

² Even though the U.S. presidential election occurred at this time, only 2.8% of the titles on the final list related to this event.

time. Approximately 2% of the 2016 IPs were flagged as potentially masking the true country location. After excluding these IPs, there were 1,568,743 unique IPs editing globally.

Administrator level Wikipedians can lock an article due to heavy editing with malicious intent (vandalism) or extensive editing conflicts among editors. This restricts IP addresses from performing edits on the article. There was no similar approach across all Wikipedias to locking articles, however. Some articles that were permanently locked in this period were clearly controversial, such as the article *Vladimir Putin* in 12 language Wikipedias, while others were perhaps only contentious to a particular group, such as the *Portugal national football team* in the Japanese Wikipedia. Therefore, if the article was locked against IP edits in at least one language Wikipedia during the entire research period, it was not included in the WikiGCI.

By utilizing the interlanguage links among the articles, each language Wikipedia title was linked to the English equivalent, which served as the primary key to identify the record. The English edition was by far the largest and most edited Wikipedia, with greater than 5.5 million articles and an average of 3.5 million edits per month in 2016. This language is also one of the most widely spoken languages in the world, serving as the global lingua franca for billions of people. If a title in any language version was edited with one or more IPs in a country, that title was considered edited in that country. With interlanguage linkage, the total number of countries that participated in the editing of each article title with its extant language versions was calculated (e.g., the article title *Love* and all linked language versions of this title was edited in a total number of countries). Editors in multiple countries that spoke the same language commonly edited the same language version of a title.

This process provided a list of the top 100 Wikipedia article titles edited in the most countries (global articles), from which the WikiGCI was calculated. These titles represent ideas with the greatest global expanse. The individual country measure is calculated as:

WikiGCI = percentile rank of global articles / percentile rank of the number of unique IP addresses editing Wikipedia³

A WikiGCI score greater than one represents a rank of Wikipedia global articles edited greater than the rank of the number of unique IP addresses, indicating a higher attention to global ideas in relation to the size of its editing community. The WikiGCI of one indicates an equilibrium between the two ranks. A number less than one indicates a lower rank of Wikipedia global article editing than the rank of the number of unique IP addresses editing the encyclopedia, representing a lower consideration of global ideas proportional to the rank size of its editing community.

I employed two methods to analyze the article data. First, I analyzed the Spanish, Russian and English versions⁴ of the articles utilizing critical discourse analysis (CDA) (Fairclough, 2001; Fairclough & Clive, 1995) to identify patterns of social meaning that structure the narrations. This analysis focuses on the article as the unit of analysis. Individual edits were often discursively inconsequential (e.g., punctuation changes or adding music information to a film). Article narratives in different language versions of the same title sufficiently demonstrated global awareness and global social meaning in different countries. CDA also showed the role that institutions, events and networks played in producing knowledge. Second, I conducted a correlation analysis between the KOF Index of Globalization data (2016) and the WikiGCI to examine whether networks affect global consciousness.

RESULTS

³ Because the number of global articles edited in the most countries was a delimited set of the top one hundred from the list of all Wikipedia articles, a conventional per capita index was problematic. This subjective limit produced unstable results due to large outliers. The critical component for the numerator is the world ranking of the number of global articles edited in a country normalized by a denominator indicating the rank of the country by the size of its editing community. Calculating Z-scores for both parts was impractical because of the division of negative numbers. A rank-rank relationship (Chetty, Hendren, Kline & Saez, 2014) provided the proper index relationship while avoiding mathematical distortions.

⁴ I analyzed these three versions because of my advanced reading skills in these languages.

Investigation of Wikipedia's content produced three interesting results pertaining to the Wikipedia Global Consciousness. First, global articles edited in the most countries exhibited global consciousness by discussing awareness of the world and global social meaning, such as same-sex relations and the clash of Western and Eastern cultures. Second, the WikiGCI indicated different regional participation according to world-systems theory (Wallerstein, 2004)⁵ in editing global articles. Editing communities in the core region exhibited editing proportional to the size of their communities, while editing communities in most of the periphery except Latin America displayed low editing rates of global articles. Third, editors constructed global articles by including globally relevant institutions, events and networks in the narratives.

Wikipedia Global Articles

Wikipedia global articles edited in the most countries indicated a global level of knowledge. Mapping of the IP addresses editing Wikipedia demonstrated worldwide activity (Figure 2). Of the 203 countries⁶ investigated, editing communities ranged from large communities containing greater than 1,000 unique IPs in 97 countries to small communities containing fewer than 100 unique IPs in 61 sub-Saharan African or small countries. Furthermore, the mapping of the unlocked global articles that comprised the WikiGCI revealed the global nature of this knowledge. Wikipedians in more than 150 countries on all continents edited the content (Figure 3). Global articles edited in the most countries extended from the title *Charlie Puth* edited in 38 countries to *Halloween* edited in 66 countries, or a third of the world (Table 1). Subjects that constituted more than two percent of all titles represented a wide variety of ideas: countries, soccer

⁵ World-systems divides the world into core, semi-periphery and periphery regions based on the division of labor. Core countries have highly skilled, capital intense production, while periphery countries have labor intensive, low skilled production. The semi-periphery has qualities of both regions.

⁶ This research defines political units as countries with designations in the KOF Index of Globalization and Maxmind IP lookup table.

players, musicians, films, soccer teams, politicians, the Internet, companies, history, television programs, video games, soccer matches, astronomy and technology. Regardless of topic, global consciousness manifested in ideas discussed worldwide. For example, articles in the topics holidays, anime and terrorism conveyed understanding of the world as one place and global social meaning during the research time period.

A prime example of the awareness of the world as one place was the unlocked article that was edited in the most countries, the holiday *Halloween*. Upon reading the English, Russian and Spanish versions of the title, similar narratives appeared. The Spanish and Russian versions located the origin of the holiday in the U.K. while the English version mentioned Celtic culture. Awareness of the world as one place was expressed in that all versions clearly stated that this holiday had expanded worldwide. The Russian version specified that “глобализации” (globalization) spread the idea while the Spanish version narrated how film and television created the internationalization of the holiday. Inhabitants of countries throughout the world now know the holiday.

The narratives of the Halloween articles can also be analyzed at the ideological level of global social meaning. The Russian article reported how stores were now selling costumes, per the custom of the imported American holiday. This provoked the ire of the Orthodox Church and government, which protested that it was “несовместимым с русской культурой” (“incompatible with Russian culture”). The Spanish article seemed almost to struggle with the international and local meaning of the holiday. Although it stated that the majority of Spanish and Latin American societies maintained that the American holiday had “invadido” (invaded) their countries, it proposed that it should also be considered a Spanish holiday because similar traditions were celebrated in Celtic cultures in Spain prior to U.S. independence. Global consciousness was expressed in the contestation over the ideological meaning of the global idea. The narratives of Halloween depicted a conflict that pitted traditional ideology based on customary and religious practices of the holiday against the encroaching materialistic practices of the American version.

Global articles in other topics such as anime expressed awareness of the world as one place. The article *Yuri on Ice* (51 countries) discussed the newly released Japanese anime series depicting a male trainer from Russia instructing a male figure skater from Japan. Editors in the three languages expressed awareness of the world's oneness by situating the coupling of these different nationals within worldwide skating competitions. The development of their romantic relationship also reflected a global awareness of the growing contention concerning same-sex relationships. All versions debated the critical impact of this first gay relationship in a sports anime as well as the accuracy of its depiction. Oppression of these relationships in the world was part of the story. The Spanish-language version specified how the series highlighted the controversy of these types of relationships in Japan and Russia: "También ha llamado la atención por representar a dos personajes originarios de países con poca aceptación de la homosexualidad" ("Also, it drew attention by representing two characters from countries with little acceptance of homosexuality"). This article demonstrated that same-sex relations have become an issue of global conversations. Wikipedians were aware that it was an idea not only in their countries, but also in others worldwide.

The same-sex relationship in *Yuri on Ice* displayed the debate in the world at the imaginary level of global social meaning. Considered religiously and scientifically impermissible, some societies are starting to permit sexual minorities to define romance themselves. This article exhibits the expanding critique of the global imaginary that marriage is exclusively between opposite sexes. Only within the past 20 years have some countries officially recognized this kind of union. Secular and religious ideologies are disputing the assumed worldwide heterosexual common sense of this relationship. The contestation reported in the article chronicled the changing global social meaning occurring at the time of the editing of the articles as the anime was broadcast and discussed.

Another topic, terrorism, also exhibited awareness of the oneness of the world. All versions of the article *2016 Berlin attack* (39 countries) narrated how the Islamic State of Iraq and the Levant claimed

responsibility for a Tunisian driving a truck into crowd of Christmas shoppers in Berlin, Germany. The article listed the dozen countries from which people were killed or wounded in the terrorist attack. Editors clearly expressed the global impact of the event. The editors recounted how some politicians in different countries condemned lax asylum policies and lack of border controls among E.U. countries for the attacks. Russian editors quoted President Trump's depiction of event as a religious war, «„Исламское государство“ и исламистские террористы постоянно устраивают резню христиан в их общинах и местах отправления культа» (“‘The Islamic State’ and Islamic terrorists constantly massacre Christians in their communities and places of worship”). Editors in dozens of countries discussed how the event in Germany indicated the ongoing global collision of social values between Western secularism and Eastern Islamism.

The terrorist attack in *2016 Berlin attack* can be analyzed at the being-in-the-world level of global social meaning. It narrated how regional cultural and religious belief systems were struggling for dominance and growing protest against open borders among countries. This reflects the changing spatiality and performativity of being-in-the-world. While globalization from the 1990s to 2010s encouraged open borders for freer movements of people and goods, a growing populist backlash in the core against this influx has recently called on tightening borders. Many people are now criticizing the modernistic view of globalization where open borders are normative. This article title edited expansively in the world during the research time period denoted accelerated changes in being-in-the-world.

Other global ideas such as leisure and entertainment in Wikipedia global articles can serve as empirical units to investigate the experiences of world oneness as well. Some of the most expansive ideas were articles internationally relevant to culture such as sports (e.g., Zinedine Zidane, the French soccer superstar, edited in 51 countries), films (e.g., the global premiere of the U.S. film *Rogue One*, 59 countries) and even a coffee brand, *Starbucks* (38 countries). This could indicate growing levels of disposal income and inclusion in world networks have made leisure more important on a world level. Global consciousness

was indicated in locked articles as well. Even though these articles were locked in at least one language, articles such as *HIV/AIDS* (39 countries) and *Earth* (49 countries) were edited worldwide and expressed ideas proposed as global ideas by global consciousness scholars (James & Steger, 2016; Robertson, 1994).

Global articles demonstrate the lived meanings and changes of the ideational construct of the global consciousness at the time of their editing. They provide the ideational empiricism with which to understand a consciousness of the world as one place. Global ideas such as Halloween or a terrorist attack that affect many different societies worldwide cause an awareness that the world is one place. These global ideas can also be analyzed at different levels of global social meaning. Global ideas that appear mundane such as an anime cartoon or holiday are analytically rich at different levels (ideologies, imaginaries and beings-in-the-world). By examining different language versions of the same global idea that are actively edited in the most countries during a certain time period, one obtains a more thorough understanding of global consciousness and its changing composition.

WikiGCI

The WikiGCI revealed regional differences in editing of global articles. While core and semi-periphery countries displayed no disproportional editing of these articles, the periphery was divided into different regions that edited these articles at exceptionally high or low rates. These editing patterns in the WikiGCI scores suggested that different regions edited global articles depending on socio-economic conditions and historical contexts.

First, locking of articles produces a caveat to the understanding and application of the WikiGCI. Although the WikiGCI fairly represents many Wikipedia cultural categories, political categories tend to be underrepresented because they were locked against IP editing. To gather the 100 titles for the index that

were not locked in at least one language, I had to consult 284 titles. Cultural categories such as films, soccer, music, games and television programs were commonly open for IP edits worldwide. Other categories such as political subjects were continuously locked, most likely due to their contentious nature. Less than one third of the titles relating to politicians (e.g., *Fidel Castro*), countries (e.g., *United States*) and history (e.g., *Ancient Greece*) were open in all languages (Table 2). Caution ought to be taken when politically analyzing the results. On the other hand, this does not negate any political understanding of the world from the articles. Some articles with explicit political themes, such as *Aleppo* (the final evacuation of the Syrian city during the civil war, 48 countries) and *United States presidential election, 2016* (65 countries), were counted in the index.

Regional Patterns

The WikiGCI revealed different patterns of editing global articles by region (Table 3 and Figure 4). For the majority of editing communities in most core (e.g., U.S., Germany and France) and many semi-periphery (e.g., Russia, Saudi Arabia and Brazil) countries, global ideas that have meaning for world oneness and global social meaning seem to be ordinary compared to other world regions. These communities edited global articles proportionally to their sizes, registering moderate WikiGCI scores from .96 to 1.05. Thus, editing communities in countries that are more industrialized, have stronger institutions as well as specialize in service and information industries do not edit these ideas in any disproportionate manner. These populations tend to be wealthier, more educated and with more access to technology. Global ideas are arguably commonplace in countries with socio-economic conditions that offer more access to wealth and information.

The results concerning the periphery are equivocal, however. The majority of the editing communities in African countries (e.g., Zimbabwe, Chad and Liberia) and many Asian countries edited

relatively fewer global articles compared to core and semi-periphery countries, indicating these global ideas are considered less in countries with lower levels on socio-economic indicators. Ideas representing global awareness are more exceptional among their editing communities. These countries are characterized by lower education rates, higher poverty rates, less stable institutions as well as more employment in agriculture and natural resources. In addition, many African countries that edited no global articles have little technology and access to the Internet. Less access to education, wealth and information appears to decrease the interaction with global ideas in Wikipedia.

Most IP communities in periphery Latin American countries (e.g., Cuba, Bolivia and Panama) edited global articles at higher rates in proportion to the size of the communities, scoring from 1.06 to 1.77. High scores in Latin America may be a reflection of Schulze and Fischer's (Schulze, 2018; Schulze & Fischer 2018) proposal that this region exhibits "in-betweenness." Due to the region's early history of European colonialization and connection with world trade along with the mixture of different races and cultures, the difference between Western and non-Western knowledge is often unclear. Beginning in the 16th century, institutions such as slavery, the Catholic Church and European colonial governments deeply erased, modified or replaced autochthonous knowledge (e.g., religion, culture, education and language). These new institutions brought with them their own ideas that intermingled and normalized within the Western world. On the other hand, this hybrid positionality is different from other areas in the periphery such as Africa and Asia. Countries in those areas experienced shorter periods of Western colonial rule and less cultural penetration. Europeans colonized most of Africa only in the late 19th century, while countries such as Japan were never completely controlled. Their lower WikiGCI could reflect somewhat more robust continuation of local knowledge.

Influences on Global Articles

Institutions, networks and events were clearly part of the narratives in most global articles. Factors such as core country association with the information, mass media, markets and networks appeared in most of the articles and influenced the information.

Core country association with the knowledge dominated the global articles' information, with 83 of the 100 articles associating the title with these countries. Editors in many countries reported on core country events such as the terrorist attack in Berlin and the presidential elections in the U.S. Even the American shopping holiday Black Friday had worldwide coverage (51 countries). Europe was prominent in most of the titles relating to soccer players, matches and teams. Articles concerning manga and anime originated in Japan. Core country institutions such as soccer teams and publishers were distinct parts of the narratives.

Mass media, the media technologies reaching large audiences, influenced the writing of global articles. One-third of the titles were directly related to media items such as films, television programs and music. Many of these media items were supported by multi-million dollar companies. For example, all three language versions of *Yuri on Ice* reported Asahi TV, the billion-dollar Japanese television chain, as the main distributor. The role of films and television in diffusing the concept of Halloween was important in the narrations of the holiday. Television sponsors for soccer teams and other sporting events were commonly stated in the narratives. Mass media outlets foster ideas to become part of the global consciousness.

Market networks and institutions, furthermore, assisted information to become global articles. Editors noted in all language versions the commercialization of Halloween, which supports a huge industry based on selling costumes. The narrations of many of the soccer players included contract payments and lists of sponsors. For example, editors reported that companies such as Christian Dior and Adidas paid

millions of dollars to Zinedine Zidane to promote their products. The marketing of DVDs and CDs related to the anime program were part of the article for *Yuri on Ice*.

Regional patterns in the WikiGCI are partly explained by the amount of a country's interaction with global networks. There is a statistically significant low-moderate positive correlation between the WikiGCI and the connectivity index the KOF, $r(192) = .341, p < .001$. That is, the more a country engaged in networks (e.g., trade, overseas embassies and the Internet) with other countries on a world level, the more its IP community edited global articles. The WikiGCI is partly explained by these forms of connectivity among countries.

Therefore, many events, institutions and networks in the form of mass media, core country association (United States, Europe and Japan), markets and trade condition ideas to become global. They influence ideas to become global articles representing the Wikipedia Global Consciousness. Even though some global articles are more based on nature (e.g., *Supermoon*, a form of full moon), strong socio-economic influences shaped most of the articles. Wikipedians narrated the importance of countries, institutions and companies in constructing the global ideas. By identifying global articles, one obtains a deeper insight into the social construct of the ideational basis of the global consciousness and their transformations over time.

CONCLUSION

By theoretically focusing on global consciousness (Robertson, 1992 & 2011), or the meaning and awareness of the world as one place, I constructed a new index, the Wikipedia Global Consciousness Index (WikiGCI) based on global ideas to supplement globalization indexes based on networks and flows. While network-based indexes successfully demonstrate the structure of globalization mostly by counting objects crossing borders, the WikiGCI contributes to our understanding by providing a sense of deep social

meaning of the world as one place by analyzing global ideas. The WikiGCI provides insight into living in the oneness of the world and affirms global consciousness in Wikipedia.

Global articles were employed as the empirical units to construct the global consciousness index. The 100 top unlocked articles edited in the most countries composed the index by which to gauge the participation of a country's editors in global conversations and which socio-economic influences (e.g., mass media and core countries) condition ideas to become important at a global level. This index offers a greater insight into our world by revealing regional patterns of global knowledge production. While communities in countries with higher rates of wealth and education (core and semi-periphery) displayed no exceptional rates of editing global articles, many communities in countries with less capital intense production and technology (e.g., African countries) exhibited lower rates. Wealth and access to information condition global ideas to be ordinary.

The Wikipedia Global Consciousness Index provides a better understanding of our world by identifying global ideas that produce an awareness of the world as one place and tracking contestation and changes in global social meaning (e.g., ideologies, imaginaries and beings-in-the-world). For example, global ideas displayed awareness of the world as one place by narrating the worldwide diffusion of the American version of Halloween and the global impact of a terrorist attack in Berlin. Global articles that are edited in the most countries during a time period contain ideas that can demonstrate lived meanings that compose the global consciousness of that time. They narrate disputes that can be tracked as they transform the global consciousness. These global ideas indicated contestation in ideologies, imaginaries and beings-in-the-world in 2016. Components of being-in-world (e.g., the spatiality of open borders) and global imaginary (e.g., assumed marriage heteronormativity) were being heatedly debated. Analysis of global ideas reveals how global consciousness operates. Global ideas can be disputed while simultaneously providing our awareness of the world's oneness.

Table 1: Number of Countries Editing Unlocked Global Articles

Num. Countries	Titles	Category
66	Halloween	Holidays
65	United States presidential election, 2016	Elections
60	Associação Chapecoense de Futebol	Soccer Team
60	Miss World 2016	Beauty Competition
60	George Michael	Musicians
60	Fantastic Beasts and Where to Find Them (film)	Films
59	Rogue One	Films
59	2016-17 La Liga	Soccer Matches
57	V (entertainer)	Musicians
56	Nico Rosberg	Racing Drivers
55	Bill Goldberg	Wrestlers
54	Moana (2016 film)	Films
52	Leonard Cohen	Musicians
52	LaMia Flight 2933	Accident
51	Battlefield 1	Video Games
51	Black Friday (shopping)	Holidays
51	Zinedine Zidane	Soccer Players
51	Yuri on Ice	Television Programs
51	Doctor Strange (film)	Films
50	Andy Murray	Tennis Players
50	Five Nights at Freddy's: Sister Location	Video Games
49	The Undertaker	Wrestlers
49	Game of Thrones	Television Programs
48	Wi-Fi	Internet
48	The Weeknd	Musicians
48	Oscar (footballer, born 1991)	Soccer Players
48	Martin Garrix	Musicians
48	Aleppo	Cities
48	Gregorian calendar	Calendar
48	2016 Formula One season	Racing Competition
47	Survivor Series (2016)	Wrestling
47	2018 FIFA World Cup qualification (UEFA)	Soccer Matches
47	One Piece	Manga
46	FC Bayern Munich	Soccer Teams
46	António Guterres	Politicians
46	Miss Peregrine's Home for Peculiar Children (film)	Films
46	The Vampire Diaries	Television Programs
46	World Chess Championship 2016	Chess

45	The Chainsmokers	Musicians
45	Bonobo	Animals
45	Dragon Ball Super	Anime
45	Atlético Madrid	Soccer Teams
45	Harry Potter and the Cursed Child	Plays
44	Miraculous: Tales of Ladybug & Cat Noir	Television Programs
44	New Year's Eve	Holidays
44	Carrie Fisher	Actors
44	Antoine Griezmann	Soccer Players
43	2016 MTV Europe Music Awards	Music
43	Miss Peregrine's Home for Peculiar Children	Books
43	Alan Walker (music producer)	Music Producers
43	Andrei Karlov	Ambassadors
43	Nintendo Switch	Video Games
42	Marco Reus	Soccer Players
42	Supermoon	Astronomy
42	Pierre-Emerick Aubameyang	Soccer Players
42	United States presidential election	Elections
42	Titanic (1997 film)	Films
42	Transformers: The Last Knight	Films
42	2016 FIFA Club World Cup	Soccer Matches
42	Logan (film)	Films
42	La Liga	Soccer Teams
42	Gerard Piqué	Soccer Players
42	Sergio Ramos	Soccer Players
41	Mercedes-Benz	Companies
41	Mike Pence	Politicians
41	Manuel Neuer	Soccer Players
41	Karate	Martial Arts
41	Google Translate	Internet
41	Pop music	Music
41	FIFA 17	Video Games
41	FIFA Club World Cup	Soccer Matches
41	2018 FIFA World Cup qualification (CONMEBOL)	Soccer Matches
41	American Horror Story	Television Programs
41	Black Pink	Musicians
41	Austria	Countries
40	Borussia Dortmund	Soccer Teams
40	Burj Khalifa	Buildings
40	Gianluigi Donnarumma	Soccer Players
40	Hurricane Matthew	Hurricanes

40	Passengers (2016 film)	Films
39	Westworld (TV series)	Television Programs
39	Pirates of the Caribbean: Dead Men Tell No Tales	Films
39	Spider-Man: Homecoming	Films
39	Air pollution	Climate
39	Five Nights at Freddy's	Companies
39	Attack on Titan	Manga
39	2016 Berlin attack	Terrorism
39	2017 Formula One season	Racing Competition
39	Byun Baek-hyun	Musicians
39	Debbie Reynolds	Actors
39	Henrikh Mkhitaryan	Soccer Players
38	James Ellsworth (wrestler)	Wrestlers
38	HTML	Internet
38	Gigi Hadid	Models
38	Starbucks	Companies
38	N'Golo Kanté	Soccer Players
38	Sausage Party	Films
38	Dubai	Cities
38	Samsung Galaxy Note 7	Technology
38	Charlie Puth	Musicians

Note: The list was constructed by analyzing IP edits performed from October to December 2016. Articles devoted to lists and dates were excluded due to the wide scope of content.

Table 2: Title Locking by Subject

Subject	Number Open Titles	Number Closed Number	Total Num. (% of Total)
Entertainment (musicians, films and television programs)	27	13	40 (14%)
Soccer (players, teams and matches)	21	17	38 (13.3 %)
Countries & Politicians	3	32	35 (12.3 %)
Internet, Technology and Software	4	16	20 (7.0 %)
Companies	3	5	8 (2.8 %)
Video Games	4	4	8 (2.8 %)
History	0	8	8 (2.8 %)

Table 3. WikiGCI and Global Articles

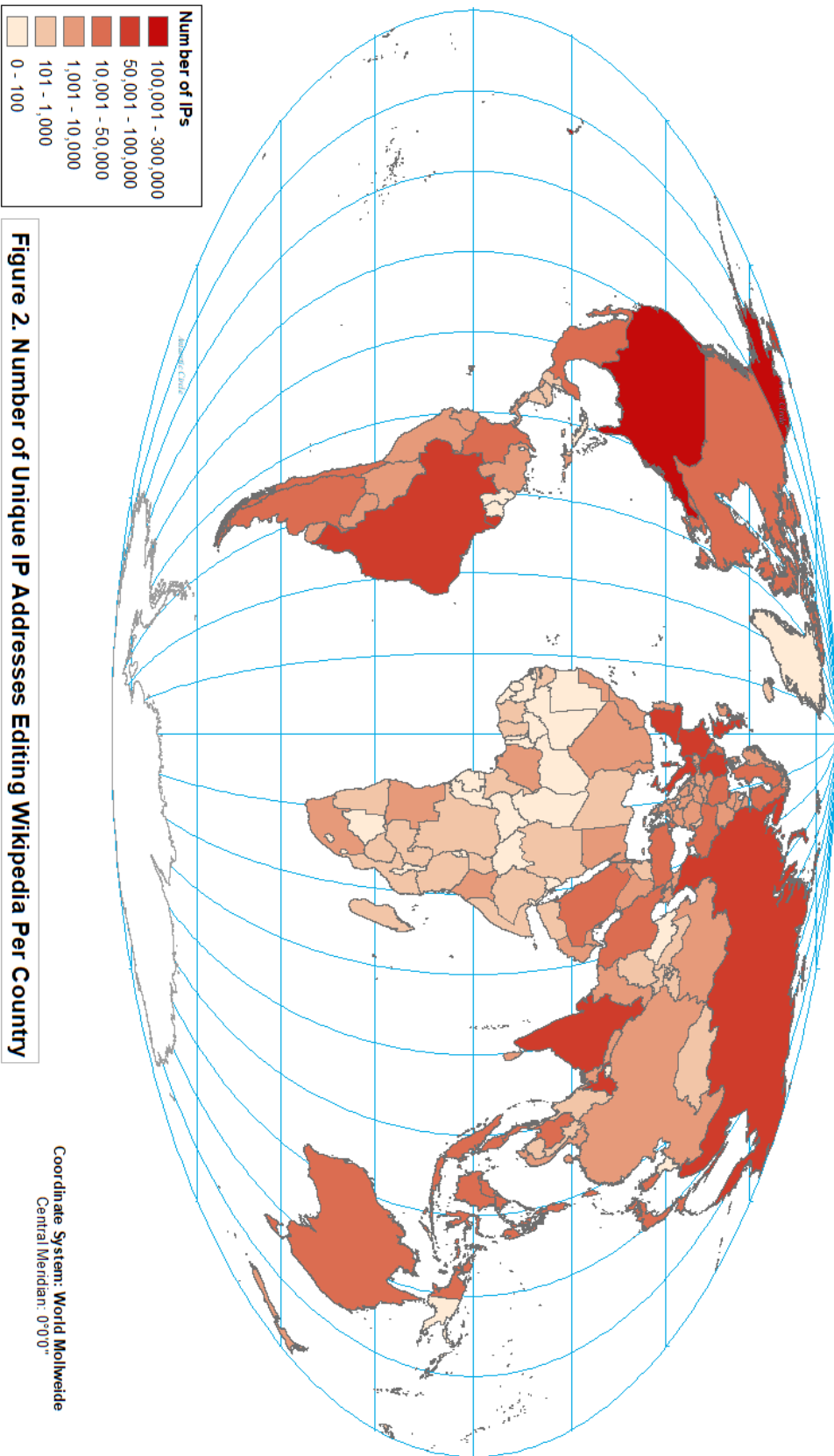
WikiGCI	Country	Num. Global Articles
5.49	Samoa	1
2.30	Saint Vincent and the Grenadines	1
2.04	Greenland	1
1.89	Marshall Islands	1
1.81	Djibouti	2
1.77	Cuba	3
1.74	Mauritania	4
1.62	Liechtenstein	1
1.27	Andorra	2
1.20	Bolivia	23
1.18	Madagascar	4
1.16	Trinidad and Tobago	8
1.16	Panama	20
1.16	Honduras	17
1.14	El Salvador	21
1.13	Congo, Dem. Rep.	2
1.13	Guatemala	16
1.11	Uruguay	47
1.10	Bahamas	2
1.10	Paraguay	21
1.09	Bulgaria	47
1.08	Lebanon	21
1.08	Chile	86
1.08	Nicaragua	12
1.08	Costa Rica	25
1.08	Armenia	18
1.07	Luxembourg	9
1.07	Montenegro	5
1.06	Puerto Rico	21
1.06	Ireland	54
1.06	Malta	7
1.06	Ecuador	37
1.06	Colombia	84
1.05	Venezuela	60
1.05	Dominican Republic	35
1.05	Brunei Darussalam	3
1.05	Kyrgyzstan	8
1.04	Uzbekistan	6
1.04	Bosnia and Herzegovina	21

1.04	Palestinian Territory	12
1.04	Portugal	54
1.04	Denmark	49
1.04	Argentina	91
1.04	Spain	99
1.03	Finland	64
1.03	Ghana	6
1.03	Belarus	43
1.03	Belgium	59
1.03	Switzerland	50
1.03	Hungary	51
1.03	Macao	10
1.02	Senegal	4
1.02	Haiti	3
1.02	Israel	78
1.02	Croatia	35
1.02	Slovakia	32
1.02	Greece	46
1.02	Bermuda	1
1.02	Turkmenistan	1
1.02	Hong Kong	65
1.02	Netherlands	84
1.02	Mexico	93
1.02	Sweden	70
1.01	Tajikistan	2
1.01	Singapore	37
1.01	Indonesia	65
1.01	Vietnam	60
1.01	Brazil	96
1.01	Iceland	7
1.01	Kuwait	18
1.01	Peru	55
1.01	Ukraine	76
1.01	France	97
1.00	South Korea	69
1.00	Canada	89
1.00	Germany	97
1.00	Kazakhstan	35
1.00	Maldives	2
1.00	South Africa	29
1.00	United States	99

0.99	Poland	81
0.99	Saudi Arabia	60
0.99	Romania	43
0.99	Serbia	37
0.99	Cyprus	6
0.99	Mongolia	5
0.99	Mauritius	4
0.98	Turkey	67
0.98	Egypt	36
0.98	Italy	96
0.98	Jamaica	6
0.98	Australia	76
0.98	Czechia	49
0.97	Albania	13
0.97	United Kingdom	92
0.97	Russia	89
0.96	Austria	46
0.96	Gabon	1
0.96	Lithuania	21
0.96	Morocco	41
0.96	Estonia	18
0.95	Moldova	8
0.95	Nepal	14
0.95	Algeria	25
0.95	New Zealand	30
0.95	Norway	45
0.95	Iran	63
0.95	Georgia	12
0.95	India	78
0.95	Suriname	1
0.95	Cambodia	4
0.94	United Arab Emirates	34
0.94	Philippines	53
0.94	Iraq	15
0.94	Taiwan	65
0.94	Libya	4
0.94	Azerbaijan	19
0.93	Qatar	12
0.93	Malaysia	47
0.93	Monaco	1
0.92	Myanmar	6

0.92	Latvia	15
0.92	Japan	61
0.91	Sri Lanka	16
0.91	Tunisia	15
0.91	Bangladesh	17
0.90	Bahrain	5
0.90	Jordan	12
0.90	China	25
0.90	Guam	1
0.90	Syria	4
0.89	Guyana	1
0.88	Thailand	41
0.87	Kenya	6
0.86	Somalia	1
0.86	Pakistan	33
0.85	Slovenia	12
0.84	Sudan	2
0.82	Angola	12
0.82	Nigeria	10
0.77	Fiji	1
0.77	Oman	4
0.76	Laos	1
0.72	Macedonia	3
0.70	Cameroon	1
0.66	Yemen	1
0.65	Uganda	1
0.64	Cote D'Ivoire	1
0.63	Tanzania	1
0.00	Afghanistan	0
0.00	Antigua and Barbuda	0
0.00	Aruba	0
0.00	Barbados	0
0.00	Belize	0
0.00	Benin	0
0.00	Bhutan	0
0.00	Botswana	0
0.00	Burkina Faso	0
0.00	Burundi	0
0.00	Cape Verde	0
0.00	Cayman Islands	0
0.00	Central African Republic	0

0.00	Chad	0
0.00	Comoros	0
0.00	Congo, Rep.	0
0.00	Dominica	0
0.00	Equatorial Guinea	0
0.00	Eritrea	0
0.00	Ethiopia	0
0.00	Gambia	0
0.00	Grenada	0
0.00	Guinea	0
0.00	Guinea-Bissau	0
0.00	Kiribati	0
0.00	Lesotho	0
0.00	Liberia	0
0.00	Malawi	0
0.00	Mali	0
0.00	Micronesia	0
0.00	Mozambique	0
0.00	Namibia	0
0.00	Nauru	0
0.00	Niger	0
0.00	North Korea	0
0.00	Palau	0
0.00	Papua New Guinea	0
0.00	Rwanda	0
0.00	Saint Kitts and Nevis	0
0.00	Saint Lucia	0
0.00	San Marino	0
0.00	Sao Tome and Principe	0
0.00	Seychelles	0
0.00	Sierra Leone	0
0.00	Solomon Islands	0
0.00	South Sudan	0
0.00	eSwatini	0
0.00	Timor-Leste	0
0.00	Togo	0
0.00	Tonga	0
0.00	Tuvalu	0
0.00	Vanuatu	0
0.00	Zambia	0
0.00	Zimbabwe	0



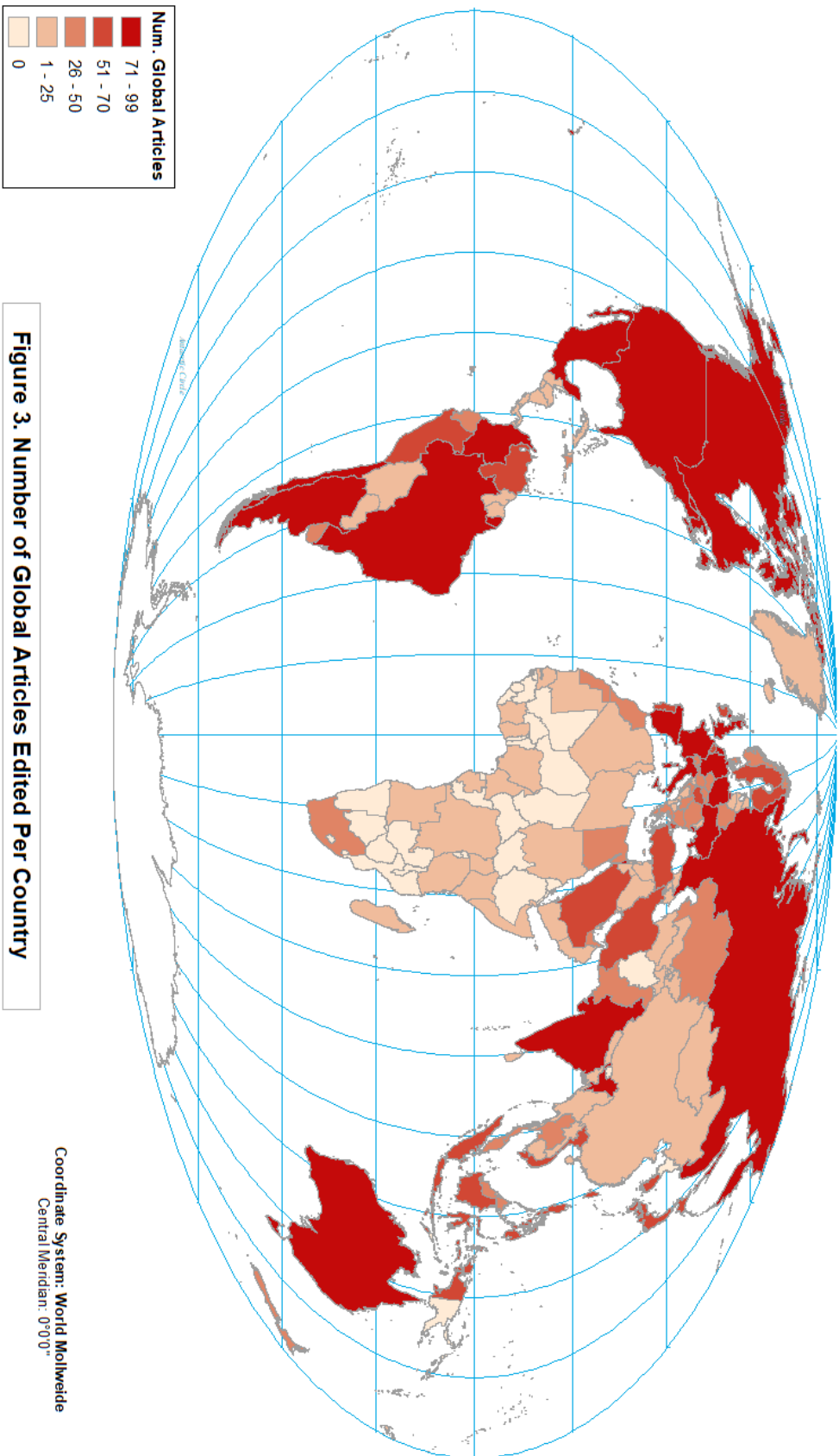


Figure 3. Number of Global Articles Edited Per Country

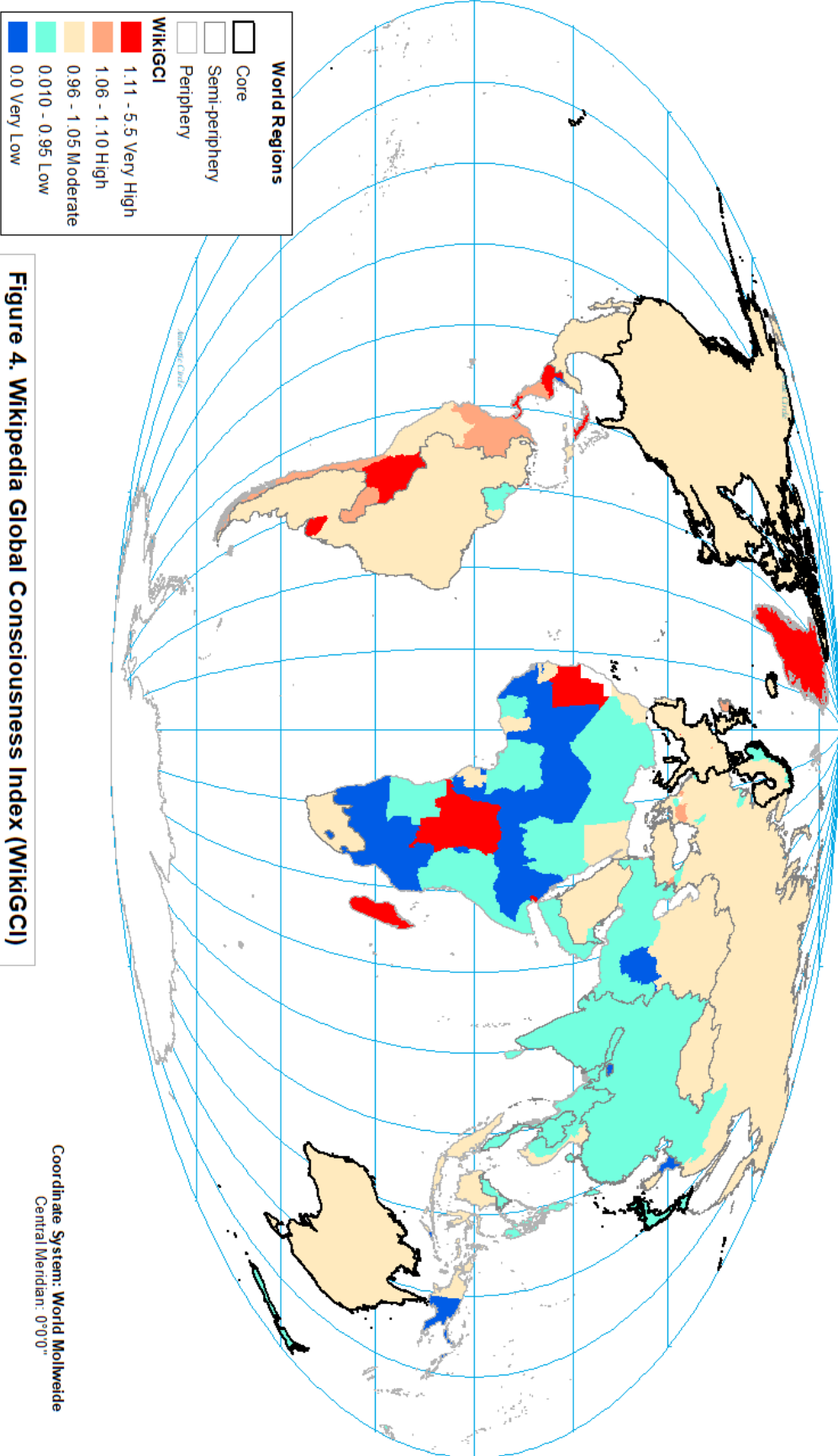


Figure 4. Wikipedia Global Consciousness Index (WikigCI)

Bibliography

- Appadurai, A. (1996). *Modernity at large: cultural dimensions of globalization* (Vol. 1). U of Minnesota Press: Minnesota.
- Babbie, E. R. (2012). *The basics of social research*. Boston: Cengage Learning.
- Caselli, M. (2012). *Trying to measure globalization: Experiences, critical issues and perspectives*. Springer: New York.
- Castells, M. (1996). Globalization, Flows and Identity: The New Challenges of Design. *Reflections on Architectural Practices in the Nineties*, 204.
- Castells, M. (1997). *The rise of the network society: The information age: Economy, society, and culture* (Vol. 1). John Wiley & Sons.
- Chetty, R., Hendren, N., Kline, P., & Saez, E. (2014). Where is the land of opportunity? The geography of intergenerational mobility in the United States. *The Quarterly Journal of Economics*, 129(4), 1553-1623. ETH Zurich, (2018). *2018 KOF Globalisation Index*. Zurich: ETH Zurich.
- Clark, J., Faris, R., & Heacock Jones, R. (2017). Analyzing Accessibility of Wikipedia Projects Around the World. *Berkman Klein Center Research Publication*, (2017-4).
- Fairclough, N., 2001, *Language and Power*. Longman: Harlow, Eng.
- Fairclough, N., Clive, H. 1995, *Critical Discourse Analysis: The Critical Study of Language*. Longman: Harlow, Eng.
- Figge, L., & Martens, P. (2014). Globalisation continues: The Maastricht globalisation index revisited and updated. *Globalizations*, 11(6), 875-893.
- Giddens, A. (1991). *Modernity and Self Identity*. Cambridge: Polity.
- Graham, M., Straumann, R. K., & Hogan, B. (2015). Digital Divisions of Labor and Informational Magnetism: Mapping Participation in Wikipedia. *Annals of the Association of American Geographers*, 105(6), 1158-1178.
- Gygli, S., Haelg, F, Sturn, J.E. (2018). *The KOF Globalisation Index – Revisited*. Zurich: ETH Zurich.
- Han, S. (2011). *Web 2.0*. Routledge: London.
- James, P., & Steger, M. B. (2017). Globalization and global consciousness: levels of connectivity. *Global culture: Consciousness and connectivity*, 21-39.
- Johnston, R. (2009). Network(s). In Gregory, D. (Ed). In *The Dictionary of Human Geography*. (498-99). Malden, MA: Blackwell.
- Kluver, R., & Fu, W. (2004). The cultural globalization index. *Foreign Policy*, 10.

- Latour, B. (2005a). On the Difficulty of Being Glocal. *Art-e-fact: Strategies of Resistance*, 4.
- Latour, B. (2005b). *Reassembling the social: An introduction to actor-network-theory*. Oxford university press.
- Lockwood, B., & Redoano, M. (2005). The CSGR globalisation index: An introductory guide. *Centre for the Study of Globalisation and Regionalisation Working Paper*, 155(04), 185-205.
- Martens, P., Caselli, M., De Lombaerde, P., Figge, L., & Scholte, J. A. (2015). New directions in globalization indices. *Globalizations*, 12(2), 217-228.
- Miller, C. (2019). China and Taiwan Clash over Wikipedia Edits. *BBC News*, 5.
- Robertson, R. (1992). *Globalization: Social theory and global culture*. London: Sage.
- Robertson, R. (1994). Religion and the global field. *Social Compass*, 41(1), 121-135.
- Robertson, R. (2009). Differentiation reductionism and the missing link in Albert's approach to globalization theory. *International Political Sociology*, 3(1), 119-122.
- Robertson, R. (2011). Global connectivity and global consciousness. *American Behavioral Scientist*, 55(10), 1336-1345.
- Sassen, S. (2002). Introduction. Locating Cities on Global Circuits. In Sassen, S. (Ed). *Global Networks, Linked Cities* (1 – 39). New York: Routledge.
- Schulze, F. (2018) Global History of Knowledge from a Latin American Perspective. Overcoming the West-Rest Dichotomy, in: TRAF0 – Blog for Transregional Research, 17.05.2018 <https://trafo.hypotheses.org/9977>.
- Schulze, F. & Fischer, G. (2018). Brazilian History as Global History. *Bulletin of Latin American Research*.
- Sklair, L. (1999). Competing conceptions of globalization. *Journal of World-Systems Research*, 5(2), 143-163.
- Steger, M. B., & James, P. (2013). Levels of subjective globalization: Ideologies, imaginaries, ontologies. *Perspectives on Global Development and Technology*, 12(1-2), 17-40.
- Steger, M. B., & James, P. (2019). *Globalization Matters: Engaging the Global in Unsettled Times*. Cambridge University Press.
- The Globalization Index. (2007). *Foreign Policy*, (163), 68-76. Retrieved from <http://www.jstor.org.ezproxy2.library.arizona.edu/stable/25462233>
- Vujakovic, P. (2009). *How to measure globalisation? A new globalisation index (NGI)* (No. 343). WIFO Working Papers.
- Wallerstein, I. M. (2004). *World-systems analysis: An introduction*. Duke University Press.

Wikipedia contributors (2014). "Wikipedia: Purpose" *Wikipedia, The Free Encyclopedia*. Available at: <http://en.wikipedia.org/wiki/Wikipedia:Purpose> (accessed 13 August 2014).

Wikipedia contributors (2017), "Help: Interlanguage Links," *Wikipedia, The Free Encyclopedia*. https://en.wikipedia.org/wiki/Help:Interlanguage_links (accessed March 6, 2017).

Wikipedia contributors (2020), "Censorship of Wikipedia," *Wikipedia, The Free Encyclopedia*. https://en.wikipedia.org/wiki/Censorship_of_Wikipedia (accessed July 16, 2020).

Yasseri, T., Sumi, R., & Kertész, J. (2012). Circadian patterns of wikipedia editorial activity: A demographic analysis. *PloS one*, 7(1), e30091.

Zache, E. (2017). "Page Views for Wikipedia, Both sites, Normalized." <https://stats.wikimedia.org/EN/TablesPageViewsMonthlyCombined.htm> (accessed March 6, 2017).