Otherwise Engaged:
Social Media from Vanity Metrics to Critical Analytics

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Vanity metrics is a term that captures the measurement and display of how well one is doing in the "success theater" of social media. The notion of vanity metrics implies a critique of metrics concerning both the object of measurement as well as their capacity to measure unobtrusively or only to encourage performance. While discussing that critique, this article focuses on how one may consider reworking the metrics. In a research project I call critical analytics, the proposal is to repurpose alt metrics scores and other engagement measures for social research and measure the "otherwise engaged" or other modes of engagement (than vanity) in social media, such as dominant voice, concern, commitment, positioning, and alignment. It thereby furnishes digital methods—or the repurposing of platform data and methods for social research— with a conceptual and applied research agenda concerning social media metrics.

Keywords: social media, digital methods, alt metrics, vanity metrics, critical analytics

This article has two broad aims: to critique contemporary social media metrics, particularly those described as vanity metrics, and to develop an alternative set of metrics (critical analytics) that shifts the focus of measurement in social media from the self online and vanity to the issue network and engagement (Van Es & Schaefer, 2017). The rationale for the shift in focus is that social media are not only a space for the presentation of self and for productive social networking but a site for the mobilization of publics around social issues and causes.

Vanity metrics is a critical term from business studies that admonishes analysts for a reliance on the brute counting of page views and likes as indicators of success in the hit and like economies (Gerlitz & Helmond, 2013; Ries, 2009). But, as I relate, the term also captures rather well the attraction of metrics that indicate how well one is doing online, and the vain act of showing it off. Building on alt metrics, which is the study (and application) of impact metrics of academic researchers in social media, I propose an alternative metrics project for social media (Priem, Taraborelli, Groth, & Neylon, 2010). Rather than concentrating on the social network in social media, I instead put forward the issue network (still within

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social media) as a site of engagement for issue professionals, academics, activists, artists, journalists, and researchers working on social issues broadly defined. It is a network (or interest community, as others have called it) that resides between the celebrities on the surface and the severely niched in the outer reaches; it is a middle ground where the actors are "highly linked locally, but scarcely linked globally" (Venturini, 2016, p. 105). In the project, I introduce metrics for issue networks as an alternative to vanity metrics for social networks. I call them critical analytics, thereby highlighting the critique of vanity metrics but also pointing up alternative metrics to measure other forms of engagement with social media.

I discuss the kind of metrics that have been developed over the past few years to argue that these measurements, such as Klout scores, quantify our modes of engagement on the basis of particular assumptions about social media use (Beer, 2016; Gerlitz & Lury, 2014; van Doorn, 2014). What is social media for? Why measure social media activity? How can we account for the emergence of an engagement metric such as a Klout score?

Klout is a scoring system for measuring influence with impact. It is derived from one's activity on such platforms as Facebook, Twitter, Instagram, Google Plus, YouTube, FourSquare, and Wikipedia as well as Klout itself (see Figure 1). The rankings are grounded through online and other baselines, including Google Trends and "real-world rankings," such as comparing the *Forbes* magazine list of most powerful women with a list of the same women based on their Klout scores. Do the outputs of the two influence rankings line up?

Klout data scientists, in their seminal academic paper in 2015 and in an accompanying (more popular) Slideshare presentation, introduce Klout as an influence measure in social media, together with its impactful, commercial utility, in the following case:

> [A] user may post a message on Facebook about her experience in a restaurant, with a link to the restaurant's webpage. A user who reads the original message may choose to react to it in several ways such as: read the message, click on the link to get more information, reshare the link with other users in his own network, or actually visit the restaurant for dinner. The type of reaction gives an indication of the strength of influence the message had on the user. (Rao, Spasojevic, Li, & Souza, 2015, p. 2282)

In the Slideshare presentation, Klout data scientists summarize the score as "the ability of a user to drive actions among other users" (Rao, Spasojevic, Li, & Souza, 2016, slide 6). One's score—from zero to 100—is presented universally as well as by topic, such as economics, politics, and travel. When Klout went public with its method in 2015, no longer were the scores of celebrities such as Justin Bieber and political leaders such as Barack Obama of most interest, particularly in comparison to one another; rather, attention was on the scores that would buttress a business case. Thus, in the category of travel were firms and titles. *Lonely Planet* has the highest Klout score, followed by American Airlines, *Travel + Leisure*, *Condé Nast Traveler*, and *BBC Travel*. The next step could be for the company to monetize the firms' and titles' Klout by offering preferred placement to others in the same space.

Networks and Sources

Facebook

Mentions
Likes
Comments
Subscribers
Wall Posts
Friends

Google+

Comments
+1's
Reshares

Twitter

Retweets
Mentions
List Memberships
Followers
Replies

LinkedIn

Title
Education
Connections
Recommenders
Comments

Wikipedia

Inlinks
Inlinks to Outlinks
Page Importance
Category counts

Instagram

Posts
Followers
Likes and Comments

Youtube

Subscribers
Views
Likes

Foursquare

Check-in's and Tips
Friends and Mayorship

Klout

+K received

Figure 1. Klout score signals. From Rao et al. (2016).

How can we interpret the score's attraction outside of the business cases? In a 2012 *Wired* magazine article, a high Klout score would allow one to "board planes earlier, get free access to VIP airport lounges, stay in better hotel rooms, and receive deep discounts from retail stores" (Stevenson, 2012, para. 7). Such a materialization of the Klout score has not come to pass. The interest in Klout-like scores, however, could be said to lie less in what Jeremy Rifkin (2000) once called a crass "age of access" commerce than in the interpretation of what social media has to offer these days for the self.

To attract attention and connections in the first place, one performs in social media in a fashion characterized by Jenna Wortham (2012) in *The New York Times* as "success theater," that is, showing others that you are successful. Marieke van Dijk (2014), the Dutch design researcher, similarly calls social media *opschepmedia*, Dutch for "media for boasting." Here social media becomes a front-stage space for the presentation of "the self we would like to be" (Goffman, 1956, p. 12).

Second, social media may be used to build a "productive network," and it is instructive to refer to the early debate concerning whether it should be called social network or social networking software. The latter represents a more utilitarian description of its purpose, and the former reflects friends "in real life" (boyd & Ellison, 2007). If it is social networking software, then one is expected to actively network, thereby making the software more productive for the self. Productive networking, now migrated online, refers to connective value, where worthwhile ties are forged. Indeed, productive networking has been built into the business connection platform LinkedIn; it could be said to be present in Twitter as well as Facebook, even though they are arguably oriented less toward gainful opportunities than to professional information seeking and ambient friend following.

How might that network be put to productive use? There are largely two forms of productive networking with connective value frequently associated with social media. One set, often related in popular intellectual essays on social media, reintroduces the work on weak ties, referring to the classic Granovetter (1973) study, which discusses the opportunities afforded by networking with those to whom one is linked but not close. It also describes how networking with strong ties (and frequent recourse to them) can be detrimental to building a broader following or movement.

In a popular debate sparked by Malcolm Gladwell (2010) on the value of social media and its potentials for social change, the key point concerns whether from social media use there can be commitment to join the demonstration at the square. Does the online following hit the streets? A rationale for the debate is to reintroduce and ultimately uphold the slacktivist thesis: the critique of online engagement that stipulates that liking and sharing are low-cost, feel-good forms of solidarity only (Morozov, 2009). But one contribution to the debate stands out for its pinpointing of where the value of social media lies: "[The] unemployed should spend their time chatting with distant acquaintances on Facebook" (Lehrer, 2010, para. 7). However crude, the statement is a direct translation of the productive value of the weak ties, and it summarizes the idea that platforms are social network*ing* sites and have productive networking value for business employment (rather than for social movements).

A third purpose of social media (for those keen on developing metrics such as Klout) is to capture and propagate consumer futurism, which refers to one of the early discoveries of the use of social networks for marketing—the existence of "cliques" and the utility of the broker, or the "highly between" individual influencing cohorts with his or her new purchases or interests. Here particularly connected users seed desire in others, or what people will want to consume in the near future. Following a particularly successful connection (or microcelebrity) on social media also can elicit "niche envy," where one covets the other's entrance privileges and access levels (Turow, 2006).

The combination of these specific social media purposes—success theater and projection, productive networking and consumer futurism—furnishes social media use with value and an urgency to be measured. Which trends have the seemingly successful and well connected recently discovered? When a follower books a table at the same restaurant as recommended by his "followee," it is an action driven in the sense of Klout, according to the company use case of the score.

From Vanity Metrics to Critical Analytics

More poignantly, with the Klout score one can become impressed with one's attractiveness to others, which is how vanity is often defined. The publishing and sharing of a Klout score bring to mind Baudrillard's (1990) notion of statistics as particular forms of wish fulfillment. Vanity metrics become fulfilling measurements of attractiveness to others. One implication for the metric is that it invites a person to continue to perform for the score. Here the question is raised concerning whether the metric measures or in fact prompts behavior.

Vanity metrics not only gauge but encourage all the desires of vanity: celebrity, influence, and coolness. In the success theater of social media, heightened socialness (together with increasing connectedness) breeds what is termed *microcelebrity*, or the treatment of audience as "fan base" (Marwick & boyd, 2011; Senft, 2013). Daniel Boorstin (1961), the former American Librarian of Congress, once famously defined celebrity as the quality of being well known for being well known. The accompanying critique in that work concerned how celebrity is fashioned by fame rather than granted by greatness. Social media metrics propagate this loop of well-knownness (and constructed celebrity as notoriety rather than greatness) by keeping score and displaying it in number badges, follower counts, and similar outward indicators. The *micro* in the term *microcelebrity* is apt here in the sense that it is a product of minor fame indicators.

Networks are productive not just by manufacturing displays of metrified microcelebrity but also in that they output influence. Indeed, the second aspect of vanity metrics derives from ideas of influencers in networks or the clout a particular person wields that is construed as palpable influence. In *Linked: The New Science of Networks* and elsewhere, Barabasi (2002) discusses how networks of influence can be thought of in popular terms as a handshake distance measure. How many handshakes away is one from the chief executive officer of a major corporation and thus from the largesse he or she may be able to dispense? One's placement in the network may be measured according to the path length from other nodes, and being highly between means being particularly well placed such that one's distance to others of interest is shortest (Freeman, 1977). Betweenness centrality becomes an influence score in social media when viewed as productive social networking platforms. One's influence is measured as such, and the influencers thereby become identified, valued, and marked up.

Finally, another desire behind vanity relates to consumer futurism, trending, and, ultimately, locating and displaying coolness. Cool hunting is a highly marketable skill for social media analysts and community managers. As Frank and McGuigan have argued, the rise of "cool capitalism" comes hand in hand with the "conquest of the cool" by marketeers (Frank, 1997; McGuigan, 2009). There are network measures for rising relative novelty (such as Twitter's "trending topics") as well as those who spread it to future consumers (the highly between), but cool hunting adds the adjudication of trend. Who is acting on a trend in one way or another as a style statement? That could be labelled "coolness" (Liu, 2004). As Alan Liu has pointed out, the cool has resided online since the advent of the Web; it has been a category of website since the earliest directories were made to organize the Web through "cool site of the month" awards and other similar taxonomies, such as the "weird" in the early (and contemporary) Webby Awards. The edgy is to be found, labeled and valued as such online.

More recently, with the reemergence of the filter bubble—where content is recommended based on one's preferences—trends, too, have become personalized (Pariser, 2011). Twitter's trending topics are based on one's geography and other "signals," which in a sense displace and distribute trends from a broader societal scale and scope into the smaller networks of the microcelebrities and well niched, who then would be expected to spread them.

The argument thus far concerns the assumptions about the purposes of social media—success theater and projection, productive networking and consumer futurism—that lend value to its use and an

urgency for it to be measured. The measurements are vanity metrics because they take seriously front-staging or success theater activity in social networking sites as productive and valuable. The attractiveness of vanity metrics lies in the desires they seed and reflect in the self but also in the promise of the identification of trend and trendsetters, in a realm associated with the cool. Metrics such as Klout scores would like to monetize influencers' impactful restaurant choices.

I propose an alternative to vanity metrics, however, that could be construed as an agenda or a proposed pathway for an alt metrics project for social media (rather than one for novel academic citation analysis, whence the term is borrowed). There are already alternative uses, such as "analytic activism" (Karpf, 2017). Nongovernmental organizations (NGOs), political parties, and governmental agencies alike measure the resonance of their campaigns as well as the meaning of the mentions of their slogans as well as leaders in media monitoring exercises. NGOs, especially, are also developing metrics to study outreach effectiveness, such as SumOfUs's MeRA (Members Returning for Action), or the "number of unique members who have taken an action other than their first one" (Karpf, 2017, p. 148). The critical analytics presented in the following discussion are less an effort to meet the goals of grassroots organizing, political campaigning, or corporate branding endeavors, though they could be repurposed as such. Rather, they provide an overall approach (with examples) to studying issue work in social media, more from the point of view of the social researcher than the marketing or campaigning professional (Marres, 2015).

Analytics for social movements (or measuring "movement power") also have been conceived through operationalizing Charles Tilly's WUNC acronym, standing for worthiness, unity, numbers, and commitment (Tilly & Wood, 2016; Freelon, McIlwain, & Clark, 2016). In the case study of #blacklivesmatter on Twitter, unity is conceived as hashtag discipline, numbers as recognized contributors, and commitment as repeated participation. (Worthiness is not quantified.) Although they are put forward as means to measure a social movement online, these are also a form of critical analytics as described here, because they locate an issue network and create indicators that are alternatives to marketing measures such as influence or clout.

Critical analytics proposes an alternative to vanity metrics, and it begins with a shift away from social media as a productive social networking site for self-presentation only. Rather, it also could be viewed as space for studying social issue networking. That is, metrics could be devised for social media that do not build on it as vanity space but as one for social issue work. Although the proposed metrics below are by no means fully formed, social issue networking would, at a minimum, consider (1) the specific actors that give voice to the issue with the greatest strength, (2) the issue areas or fields taking up the concern and those ignoring it, (3) the longevity or durability of actors' concern, (4) its specific articulation as well as counterarticulation, and (5) the set actors who specify the concern in the same manner but who may not be allies. In this rendering of the issue space to be charted are thus dominant voice, concern, commitment, positioning, and alignment. I briefly explain these with a series of illustrations.

On the streets, in meetinghouses, and in pamphlets, but also online in forums, websites, blogs, comment spaces, and now increasingly on social media platforms such as Facebook, Twitter, and Instagram, causes are put forward, taken up (or ignored), pledged to, rearticulated, and rallied around,

and analysts monitor and measure the activity. Five measurements for social media and other online media are put forth here. First, *dominant voice* captures the sources considered most impactful (though not necessarily credible) within that issue space. Second, *concern* refers to whether a person or organization (or sets thereof) are present or absent within the space. Who is doing or occupying the issue, and who has deferred? Third, *commitment* is the longevity or persistence of concern. Do actors move into and out of the issue space as trend followers without qualm, or do they abide by their concern? Fourth, *positioning* is determined through the choice of words that are employed to denote and discuss the matter of concern. Are these words part of an agenda or stance-taking, or are they conscious efforts to step outside the fray? Last, *alignment* is a term for group formation through positioning. That is, who else is using the same issue language and therefore shares a similar position? They may be strange bedfellows in the sense of not belonging to an area, field, coalition, or partnership, but their choice of language aligns them with others who elect to employ the same terms. Together, these and other alt metrics for issue work in social media provide alternatives to measuring vanity in spaces of self-presentation; however, such vanity uses of the media should not be dismissed entirely or even fully separated from those described in the next section.

Figure 2. Rendition of mentions of "HIV vaccine" in the business and health sections of leading U.S. newspapers in 2009. Analysis by students at the University of Amsterdam, May 2009.

Critical Analytics

Dominant Voice

Which sources are given in an (authoritative) issue space, and of those, which dominate and which "speaking subjects" are cut down or marginalized (Foucault, 1972)? One particularly stark

illustration of the study of dominant voice is an analysis of the sections of the newspaper where the HIV vaccine is most discussed. An issue in 2009 involved the prospect of creating a vaccine that would protect those without HIV-AIDS or treat those with it. As a group of researchers and I found, an HIV vaccine was discussed proportionally much more in the business rather than in the health sections of leading U.S. newspapers (see Figure 2). Here, the authoritative space is the news, and the dominant voice is business news—though it is worthwhile to state that, while the health section may be marginal, an HIV vaccine is not just a news item; it is also an issue that is part of a larger global health, intergovernmental, and transnational nongovernmental agenda, as is shown in Figure 3.

Gates and Gates grantee issues compared and ranked.

HIV/AIDS
Malaria
Poverty
Vaccines
Tuberculosis
Maternal Health
Infectious Diseases
Cancer
Food Security
Global Health
Immunology
Child Health
Epidemiology
Climate Change
Public Health
Cell Biology
Immunisation
Microbiology
Brain Sciences
Molecular Biology
Reproductive Health
Water and Sanitation
Hunger
Parasitology
Vaccine Development
Agricultural Development
Malnutrition
Newborn Health
Population Health
Adolescent Health
Diarrhea
HIV Prevention
Infection

Influenza
Neglected Tropical Diseases
Neuroscience
Vaccination
Abortion
Basic Life Sciences
Chagas
Clinical Trials
Experimental Medicine
Leishmaniasis
Maize
Nutrition
Pneumonia
Reproduction and Development
Animal Health
Cardiometabolic Science
Conflict Resolution
Genetics
Genomics
HIV Treatment
Human African Trypanosomiasis
Malaria Transmission
Malaria Vaccines
Sleeping Sickness
Structural Biology
Vector Borne Diseases
Youth Issues
HPV
Agriculture
Bioinformatics
Biological Threats
Chlamydia
Clinical Sciences
Congenital Disorders
Crop Research
Education
Endocrinology
Equitable Trade
Governance
Health Surveillance
HIV Strategic Information
HIV Technologies
Human Health
Independent Media
International Public Health
Malaria Diagnostics
Malaria Treatment
Plant Science
Quality Education
Rural Development
Solid Waste Management
Strong Communities
Vector Biology
Womens Health

Yam Virus Diseases
Access to Medicine
Artemisinin
Bacterial Infections
Biostatistics
Biotechnology
Cervical Cancer
Clinical Epidemiology
Coffee
Contraception
Crop Improvement
Diarrheal Disease
Disease Control
Drug Discovery
Family Planning
Filarial Diseases
Food Safety
Health
Health Policy
Health Services
HPV Vaccine
Human Nutrition
Immunity
Imported Diseases
Infection Biology
Integrative Physiology
Malaria Prevention
Malaria Research
Measles
Medical Anthropology
Microfinance
Millennium Development Goals
Oncology
P. Vivax
Preventive Medicine
Protein Science
Public Libraries
Sexually Transmitted Infections
Social Protection
Transcription Biology
Tuberculosis Research
Viral Infections
Virology
Wastewater Management
Yellow Fever
Adolescent Issues
Agricultural Ecosystems
Animal Welfare
Bacteriology
Biochemistry
Biodiversity
Biomedicine
Cancer Research
Cassava
Child Protection
Child Survival
Children with Disabilities
Cholera
Cholera Vaccine
Chronic Disease Epidemiology
Cocoa
Coffee Farming
Copyright
Cowpea
DNA Repair
Emerging-Market Countries Investments
Environmental Health
Environmental Sanitation Planning
Excreta Management
Foods Fortification
Gender And Health
Gene Regulation
Genetic Research
Genomic Instability
Health and Sanitation
Health Care
Health Interventions

Health Systems
Health Systems Research And Dynamical Modelling
Health Worker Shortage
Helminth Drug Development
Hepatitis B
HIV Research
HIV Vaccine
Hygiene
Inflammation
Institutional Development
Internal Medicine
Land Grabs
Land Use And Food Security
Livestock
Malaria Cure
Malaria Resistance
Maternal Nutrition
Medical Parasitology
Meningitis
Molecular Diagnostics
Molecular Immunology
Molecular Parasitology
Molecular Research
Parasite Chemotherapy
Polio Eradication
Poor Women
Public Health Policies
Public Private Partnerships
Regenerative Medicine
Respiratory Diseases
Respiratory Viruses
Rice
Sanitation
Sanitation Systems
Septic Shock Pathophysiology
Sexual Rights
Solar Water Disinfection
Soybean
Typhoid Fever
Vaccine Research
Vaccinology
Viruses
Water
Water Policy
Wheat
Yam
Ageing in Africa
Access to Computers
Access to Education
Access to Information
Access to Internet
Access to Knowledge
Access to Learning
Access to Research
Affordable Energy
Aging
Agricultural Extension
Agricultural Research
Agricultural Statistics
Agriculture and Health
Agriculture Policy
Agrobiodiversity
Air-Sea Gas Exchange
Amoebiasis
Anti-Immunopathological Vaccines
Applied Virology
Avian Vaccine
Baby-Friendly Hospital Initiative
Biological Chemistry
Biosensors
Bovine Tuberculosis Vaccine
Cardiovascular Diseases
Cardiovascular Sciences
Cashew Processing
Cashew Production
Cashew Sector
Cell Biology And Malaria
Cell Sciences
Cell-Free Bioproduction
Cellular Biotechnology
Cellular Microbiology
Cereals
Childhood Bacterial Meningitis Vaccine

Children Health
Classical Swine Fever
Clean Water
Cobalamin
Contagious Bovine Pleuropneumonia
Contraception Advice
Counterfeit Medicines
Crop Technology
Debt Resolution
Dengue
Dentistry Research
Development Policy
Diabetes
Disability
Disaster Relief
Drugs
East Coast Fever
Eco-Efficiency And Agriculture
Economic Development
Economic Development And Employment
Ecosystem Forecasting
Ecosystem Modelling
Education and Development
Employment and International Migration
Environmental Specimen Bank
Ethics
Evolutionary Biology
Female Sterilisation
Financial Inclusion
Fish Sauce
Folic Acid
Food Aid
Food Integrity
Food Policy
Food Prices
Food Production
Food Security Economics
Foot-And-Mouth Disease Vaccine
Gastroenteritis
Gastroenterology
Gastrointestinal Disease
Gender Equality
Gender Equity
Gender Inequality
Gender Risk Management
Global Development
Global Disease Control
Global Disease Epidemiology
Global Education
Global Food
Global Food Policy
Goat Plague
Goat Pox
Governance And Democracy
Green Energy Technology
Health and Social Care
Health Logistics
Hepatitis C Vaccine
HIV Aids Diagnostics
HIV Aids Treatment
HIV Sexual Transmission
HIV Travel Restrictions
Human Excreta
Human Influenza Vaccine
Human Rights
Human Samples
Immunotherapy
Inequality
Infant Nutrition
Infection And Immunology
Infection Research
Inflammatory Disease
Infrastructure And Trade
Insect-Borne Diseases
International Health
Invasive Species
Iron
Land Acquisitions
Land Degradation
Land Rights
Libraries
Livestock Diseases
Local Government
Lymphocyte Development
Maize Flour
Malaria Diagnosis
Malaria Drug Development

Malaria Eradication
Malaria Vaccine Development
Management Services
Marine Environment
Marine Resources
Maternal Survival
Mathematical Modelling And HIV Epidemic
Medical Engineering
Mental Health
Metabolic Diseases
Metabolism
Microbes
Milk
Molecular Bioanalytics
Multinutrient Supplements
Museums
Music
Nanobiotechnology
Neurology
Neuroprosthetics
Neuroscience Research
Newborn Survival
Niacin
Nutrition Security
Nutritious Foods
Ophthalmology
Packaging Industry
Parkinson's Disease Vaccine
Pediatrics
Perinatal Health
Pest Species
Pit Latrines
Poliomyelitis
Porcine Cysticercosis
Poverty And Trade
Pregnancy Testing
Prostate Cancer Vaccine
Pyridoxine
Radiology
Regional Trade Agreements
Reproductive Rights
Riboflavin
Rift Valley Fever
Right To Food
Rio+20
Rotavirus Disease
Rotavirus Vaccines
Rubella
Safe Water
Sanitation and Flooding
Sanitation Services
Savings Banks And The Poor
Self-Employed Women
Sexual Health
Sexually Transmitted Infection Screening
Sheep Pox
Social Development
Social Security
Soil Fertility
Soil Science
Soil-Transmitted Helminths
Soils
Soy Sauce
Staphylococcus A Vaccine
Stem Rust
Structural Systems Biology
Sustainable Infrastructure
Sustainable Sanitation
Swine Flu Vaccine
Systems Infection Biology
Theatre
Thiamin
Tropical Forages
Trypanosomiasis
Tuberculosis Treatment
UG99
Urban Health
Urban Poor
Urban Sanitation
Urbanisation
Urbanization And Development
Vaccine Delivery
Vaccine Management
Vasectomy Advice
Vector Control
Vector Engineering
Virology And Immunology
Vitamin A

Figure 3. Funded and unfunded issues by the Gates Foundation, according to an analysis of the issue agendas (found on their websites) of the foundation as well as its grantees. Resized according to frequency of mentions and colored according to funded (red) and unfunded. Analysis by Digital Methods Initiative, 2014–2015.

The Gates Foundation (like the news) is also an authoritative space; it is among the largest private foundations in the world funding projects related to global health and development. In a comparison in 2014 between the issues on the Gates funding agenda and the issues of concern to the actors in the global health and development field more broadly, one notes that certain issues are nominally funded and others are inevitably not (see Figure 3). Among the unfunded issues high on the agenda of the field actors are poverty, food security, and climate change. It is important to mention that

the unfunded issues may be covered by the foundation in other terms, because the analysis concerns the issue language employed by the actors rather than broader categories or groupings. Such an ethnographic starting point or heuristic takes seriously how the actors in the field deploy terms, as I note in the later discussion of positioning. The unfunded issues of poverty and climate change also could be described as even broader issues outside of the admittedly wide scope of global health or more specific language from intergovernmental and transnational actors (*food security* is a term coined at the World Food Summit in 1974, according to the Wikipedia article on the term).

As shown in Figures 2 and 3, business dominates an HIV vaccine as a news item, and the global health and development field highlights issues unfunded by the Gates Foundation. Dominant voice analysis is not only critique opening the discussion of potentially significant attention deficits but also a means to insert (in a countermapping tradition) the language and agendas of the nondominant voice (Crampton, 2010).

Fukushima nuclear disaster as environmental and species concern?

QUERY: site:greenpeace.org Fukushima site:worldwildlife.org Fukushima
METHOD: Query leading environmental and species NGOs for Fukushima
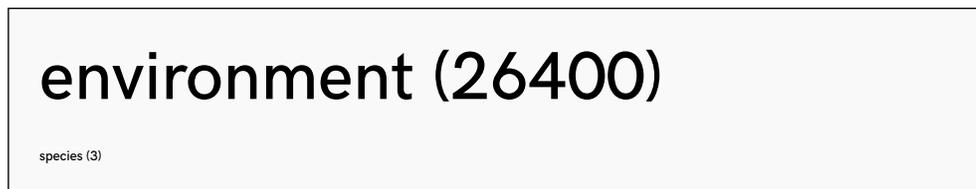
map generated by *tools.digitalmethods.net*

Figure 4. Issue cloud of environment and species, showing which type of matter of concern Fukushima is, according to the quantity of mentions of "Fukushima" on the websites of Greenpeace and the World Wildlife Fund, respectively, according to Google results' page counts, in March 2011.

Concern

To which actors is an issue a matter of concern? The becoming of a matter of concern has been summarized as the "redirection of attention" (Latour, 2008, p. 48) by publics. As groups of children's rights, social justice, ICT4D, or other issue-oriented NGOs go about their work of creating campaigns, tool kits, graphic animation videos, serious games, and other action formats to seize the attention of other issue professionals in the bubble (as it is often colloquially referred to) and the general public outside of it,

events transpire where a decision must be made about whether to make an issue into a matter of concern. Should attention be redirected toward it? In other words, should there be concerted efforts to make it into a matter of concern? The significant nuclear accident in 2011 in Fukushima, Japan, caused by a tsunami led to the release of radiation, including a spread of radiated water off the coast. As the events were happening, a group of action researchers and I asked the question, to whom is this issue a matter of concern? With the Lippmannian Device, a Google scraper that searches and outputs source clouds resized according to the number of pages returned for an issue queried, we queried for a leading environmental NGO as well as an NGO concerned with species (see Figure 4).

Issue professionals and others may ask what kind of issue Fukushima is. Is it primarily a nuclear issue? Or is it perhaps a political one in the sense that a Japanese political party is invested in nuclear power while others are firm opponents? What could Fukushima do to an issue? The Fukushima event resonated greatly with Greenpeace and very little with the World Wildlife Fund. The finding would indicate a skewed distribution of concern toward the environment and away from animals or marine life, at least in the immediate aftermath, according to the technique. From the points of view of the NGOs and the health of the issues, it should be noted that, since the tsunami, both Greenpeace and the World Wildlife Fund have been active in the antinuclear issue space in Japan, with campaigns based on the lessons from Fukushima. The critical analytics presented here are snapshots relating not only to whether but specifically to whom an issue is a matter of concern at a given time. Moreover, one can ask, who is absent and who may be subject to cajoling into joining at another given time, when another snapshot may be taken? Longitudinal concern, or stringing together snapshots of concern, is the subject of commitment. It refers to concern over time despite lessening (rather than increasing) attention, as described below.

Commitment

For how long is an issue a matter of concern to the actors? Indeed, in addition to who deems an issue a matter of concern (or whether the issue is present or absent in the actor's communications), the related question for the issue concerns longevity or perseverance, despite lessening attention by others. Longevity may be inconvenient, especially if other issues arise that may receive more attention and may therefore seem more attractive. Funders may have left the previous issue. Should you, too? In describing commitment, one may differentiate between the citizen who must care for a community beyond oneself and a consumer who needs to care only for the self (Suleiman, 2003).

As an illustration of studying commitment as a form of critical analytics, I present an analysis of Greenpeace's longevity of concerns, undertaken on the basis of its campaigning behavior, as expressed on its website. It is performed using the Wayback Machine of the Internet Archive, with a capturing and rendering technique developed to analyze the history of a website over time as an organizational history (Rogers, 2013). Having captured the website's front pages over a seven-year period, which issues persist (Greenpeace as citizen), and which are fleeting (Greenpeace as consumer)? In this manner of a commitment mapping, Greenpeace is found to be remarkably consistent in its main issue campaigning: From 2006 to 2012 (the time frame of the mapping), Greenpeace did not waver from its campaigning for

"Nuclear," "Oceans," "Toxic," "Forests," "Climate," and "Peace and Disarmament," as the menu items read (see Figure 5). In each year, those main issues are present, while a smattering of others appears and disappears (genetic engineering and sustainable trade) or appears and remains, only to leave the front page years after the analysis (agriculture). Year-on-year campaigning for the same issue demonstrates a remarkable resistance to issue fatigue.

Greenpeace International's issue commitment according to the annual
occurrence of its campaigns, 2006-2012, on Greenpeace.org's website

QUERY: https://web.archive.org/web/*/greenpeace.org
METHOD: Browse the Internet Archive's Wayback Machine

Nuclear (7)
Oceans (7)
Toxic (7)
Forests (7)
Climate (7)
Peace and Disarmament (7)

Sustainable trade (4)

Genetic engineering (4)

Agriculture (3)

map generated by *tools.digitalmethods.net*

Figure 5. Issue cloud of Greenpeace's issue commitment shows consistent campaigning for the same issues over a seven-year time frame, 2006–12. Analysis by Anne Laurine Stadermann.

The daily appearance of the menu item on a website and the content that must be generated to sustain it, lest it becomes "empty," also could be described as a commitment device. Another example of such an issue-sustaining formula is the United Nations calendar, with its annual World AIDS Day on December 10 (and many other issue days throughout the year).

The question remains, however, whether content activities bear out such a finding of commitment. Remaining within the realm of website analysis, one can query the Greenpeace website for

all the main campaign keywords to create a snapshot of the number of pages dedicated to each (see Figure 6). In 2012, Greenpeace shows an even distribution of attention to each of the issues (where attention is measured by page count per issue); however, "Nuclear" and "Climate" have more copy (by some 2,000–3,000 pages with mentions) than "Toxic." Thus, commitment, as longevity of concern, also is continually tested by the advent of new causes and techniques to measure the extent to which the old ones still matter.

Greenpeace International's distribution of concern according to campaign word count, 2012, on Greenpeace.org

QUERY: site:http://www.greenpeace.org Nuclear, "Climate change", etc.
METHOD: Query Google Scraper / Lippmannian Device

Nuclear (11300)

Climate change (9860)

Oceans (9390)

Forests (9370)

Agriculture (8790)

Peace & Disarmament (8720)

Toxic pollution (8540)
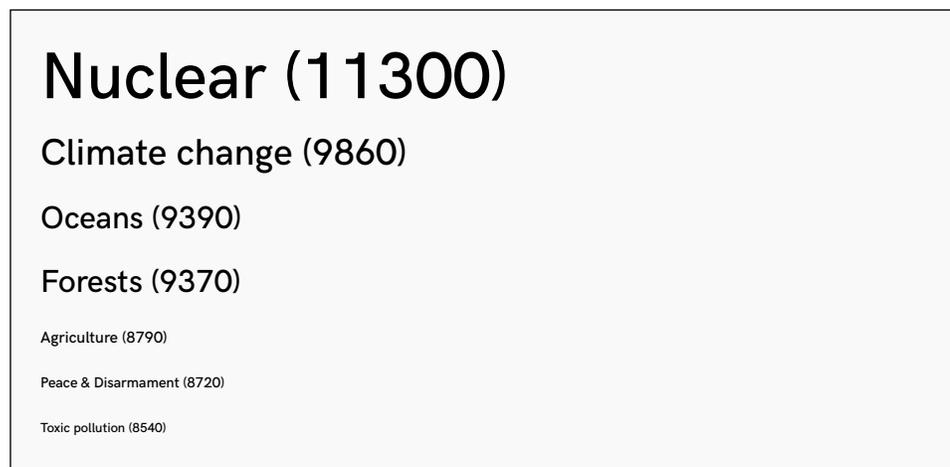
map generated by *tools.digitalmethods.net*

Figure 6. Issue cloud of Greenpeace's distribution of concern on the basis of Google results' page counts per campaign, on its website, Greenpeace.org, 2012. Analysis by Anne Laurine Stadermann.

Positioning

A positioning analysis begins by locating and placing the actors' purposive keyword choice (or issue language) vis-à-vis that of others in the same space (Williams, 1976). Rather than an exercise in reception, it is one of detecting (and meaningfully interpreting and plotting) issue space insertions by actors. In social media, when #blacklivesmatter is met with #alllivesmatter, the actors are injecting a counterpositioning, or, as described by Akrich and Latour (1992), an antiprogram into the space of a program. It could be called a sponsored insertion if it is undertaken by political lobbyists or operatives, or

one could even call it a debate if there are views exchanged, but much sifting work must be done to unearth the artful agents working in the subpolitical realm or in organizing the heap of short texts into what could be called orderly transcripts of a debate.

Rather than detective work or debate mapping, it is described here as positioning analysis, and the questions to pose are, who is joining a program and who is joining an antiprogram, with which nuance and from which location? Positioning as locating is thus not only substantive but topological in a geographical sense. Geocoordinates often accompany digital media, and one may place content in a (seemingly) straightforward geographical sense, however much pinpointing location (and visualizing it) are fraught with issues of toponymy, density, tiling, and other complicating factors.

One example may serve as an illustration of such positioning analysis. When the U.S. Supreme Court ruled in favor of same-sex marriage in 2015, on Instagram (as well as on Twitter and across social media), the hashtags #lovewins and #celebratepride and the counterhashtags #jesuswins and #loveloses could be said to position those deploying them in the societal issue space. One lauds the court's decision with a program, and another derides it with an antiprogram. Here the critical analytics concerns the accounting for the positioning for and against, but such oppositions should be nuanced because there are multiple antiprograms and other acts in that space, such as users spamming, trolling, and hijacking.

Those joining programs and antiprograms are often considered issue-specific "hashtag publics" and are described as bursty joiners and leavers (Bruns & Burgess, 2015; Rambukkana, 2015). One contribution of these publics that demonstrates their relatedness is the memetic, which refers to content sharing similar characteristics in form and substance, made with knowledge of the other content and circulating in the space (Shifman, 2013). With #jesuswins comes a cascade of crosses and red shades of color, which may be contrasted to the abundant use of the rainbow image over at #celebratepride (see Figure 7). The meme and countermeme are furnished by the competing uses of filters, the original Instagram feature and source of its popularity.

Working with the hashtags, one may chart the use of #lovewins and #jesuswins (as well as related hashtags #loveloses and #jesuswins) on Instagram, where related hashtag analysis would confirm that clustered hashtag publics, while in camps, also nuance their positioning into one particularly religious (#jesuswins with images of the cross) and one against the ruling and same-sex marriage where #loveloses expresses sentiment against the validity of same-sex marriage. When locating (geographically) the posts, one notes densities in specific parts of the United States (including the Bible Belt), albeit with far fewer postings than #lovewins, which also resonates outside the United States (see Figure 8). Here the analysis substantively (through a combination of hashtag and visual meme analysis) and geographically positions the reactions to the court ruling.

Figure 7. (a) Rendition of meme as filter competition on Instagram after the U.S. Supreme Court ruling on same-sex marriage in July 2015. Analysis by Bastiaan Baccarne, Angeles Briones, Stefan Baack, Emily Maemura, Janna Joceli, Peiqing Zhou, and Humberto Ferreira, Digital Methods Summer School 2015.
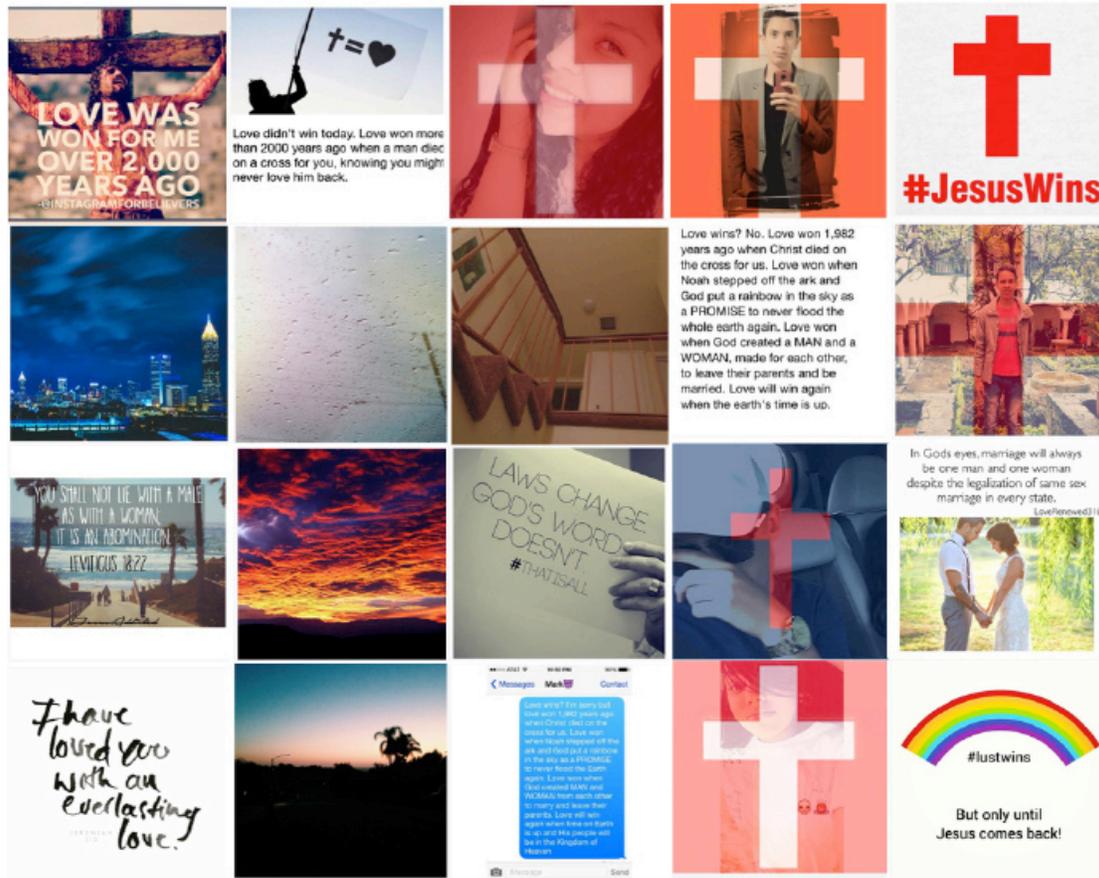
#jesuswins

Figure 7. (b) Rendition of countermeme as filter competition on Instagram after the U.S. Supreme Court ruling on same-sex marriage in July 2015. Analysis by Bastiaan Baccarne, Angeles Briones, Stefan Baack, Emily Maemura, Janna Joceli, Peiqing Zhou, and Humberto Ferreira, Digital Methods Summer School 2015.
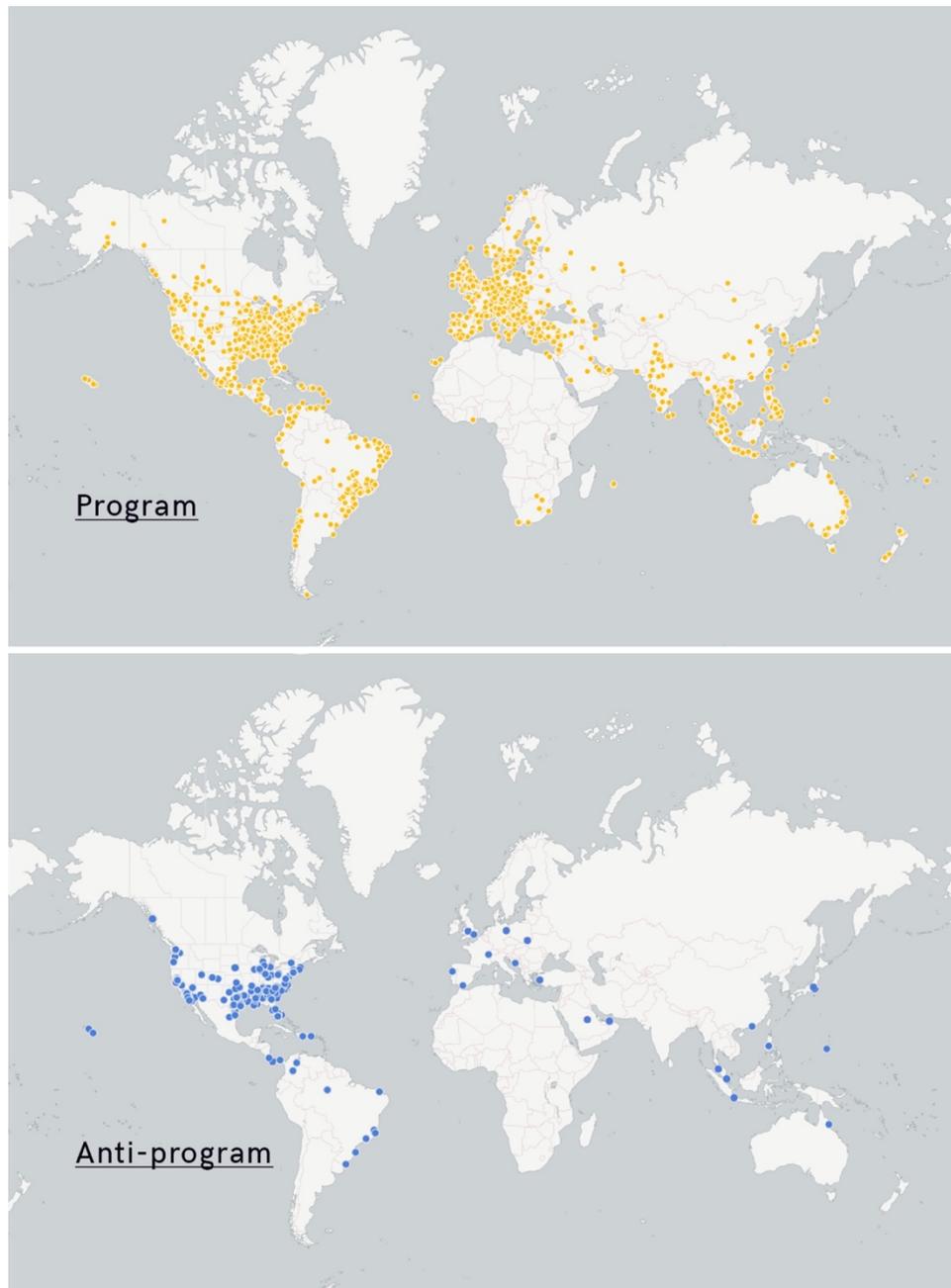
Figure 8. Geolocation plots of Instagram users of competing hashtags (#celebratepride/#lovewins program and #jesuswins/#loveloses antiprogram) after the U.S. Supreme Court ruling on same-sex marriage in July 2015. Analysis by Bastiaan Baccarne, Angeles Briones, Stefan Baack, Emily Maemura, Janna Joceli, Peiqing Zhou, and Humberto Ferreira, Digital Methods Summer School 2015.

Alignment

The use of the term *alignment* (and perhaps the usefulness of the analytics) are drawn from Walter Lippmann's (1927) description of how publics decide which side to take in political affairs. Rather than making meticulous study of a social issue and the options facing those in the business of policy making, they look instead for "coarse signs of where [their] sympathies ought to turn" (Lippmann, 1927, p. 64). In this reading, the "coarse signs" are particular keywords or terms actors use when discussing an issue. When multiple actors use the same language, or when publics do so, they align. Is the barrier between Israel and the Palestinian Territories to be called a security fence or an apartheid wall? When *security fence* is used, it is the Israeli position, whereas *apartheid wall* is the Palestinian position. Other terms could be construed as measured side-taking (*separation wall*), efforts of reconciliation (*separation fence*), or neutrality (*barrier*; see Figure 9).
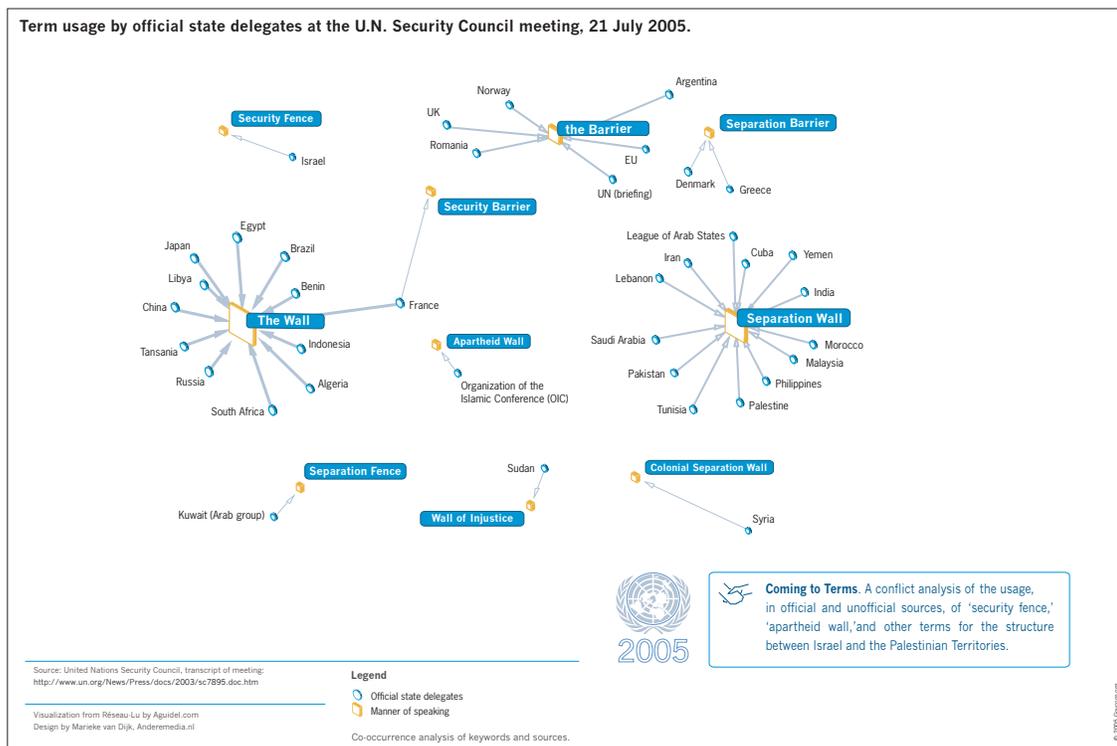
Figure 9. Alignment of countries in the UN Security Council on the basis of the use of keywords for the barrier between Israel and the Palestinian Territories, 2005. From Rogers and Ben-David (2010).

Alignment refers to the company a keyword keeps. Who else is deploying that specific issue language, and therefore associated so as to be in line with another? One aligns oneself on the basis of shared language. Whether in utterances captured by the media or replayed from the parliamentary floor,

shared language becomes Lippmann's "coarse sign." The analytics would capture signs of actor alignment. How can we consider the study of company kept by keywords? One could ask which NGOs (however disparate in their issue orientation) are aligned when it comes to discussing Internet access as a human right, or which national states are in favor of austerity measures in Europe (even though they may disagree on bailouts). These are analyses of single issues with multiple actors, but one also could analyze multiple issues (keywords) and their actors, seeking clustered alignments of actors.

That organizations (broadly conceived) are aligned may be illustrated by the political quip of "where you stand depends on where you sit," attributed to Rufus Miles, a government employee during the U.S. Truman administration (Miles, 1978). Miles predicted, with great foresight, how a colleague's stance would change abruptly when he moved to another federal agency. Agencies or institutions thus may be aligned on specific issues, too.

Conclusions: Alternative Metrics for Social Media

I would like to summarize the argument made for an alternative metrics project for social media. In all, I make five moves. Building on alt metrics for science, an alternative metrics project, I propose another one, albeit for social issue spaces rather than for science. To do so, I call for a change in the networks under study by social researchers—that is, a shift from the social network (with its vanity metrics) to the issue network. The change of networks enables concentrating on the opportunities for an alternative metrics for the study of social issue engagement, which I call critical analytics. In an application of digital methods, which seeks to repurpose online devices and their methods for social research, the proposal here is to repurpose alt metrics scores and other engagement measures for social research (Rogers, 2013). Critical analytics—the alternative metrics project for social media—seeks to measure the "otherwise engaged" or modes of engagement (other than those done for vanity metrics), such as dominant voice, concern, commitment, positioning, and alignment.

One of the original insights of the alt metrics project in science concerns the significance of social media for the organization of attention to new work. The new metrics would anticipate scholarly interest in articles published or prepublished, and even projects under development or those that are current blog topics. It grants to the Web, and more specifically social media platforms, the status of a near-real-time data stream that would not only anticipate interest in new work but provide indications of impact sooner than the time it takes for print citations to accumulate and be counted (Thelwall, Haustein, Larivière, & Sugimot, 2013). Critical analytics is similarly considered an alternative to existing metrics projects in social media, but the relationship between alt metrics and citation analysis (Web of Science) is different from that of critical analytics and vanity metrics.

Critical analytics borrows the insight that there is professional work being organized and disseminated through social media that does not principally concern the presentation of self and vanity (though there are, of course, those aspects to science as well as to social issue work). As in the manner that alt metrics sees science networks in social media, critical analytics proposes to see issue networks.

Thus, the social network is productive not just for the self and what one would like to be but for issue engagement analysis.

Critical analytics also takes from other online engagement measurement practices such as media monitoring the idea that engagement in social media is meaningful and worthy of measure beyond the purview of vanity. Actor impact in issue spaces, the dominant voice measure, is an exercise in actor identification and source demarcation that one could undertake in science or media monitoring, where the actors are authors or opinion leaders and the sources are vetted journals or leading newspapers, respectively. Concern as redirection of attention by publics similarly may be studied in terms of novel pockets of innovation in science (Callon, Courtial, Turner, & Bauin, 1983). Commitment could be conceived as longer-than-expected attention to a news item or unfashionable scientific paradigm, still writing about it after the end of the attention cycle (Downs, 1972). Positioning may be thought of as the specific terms used over and again in news articles that signal a slant or an editorial policy in the framing of accounts of an event (Entman, 1991; Herman & Chomksy, 1988). Alignment could be conceived as of common frames across newspapers, showing how the newspapers were in line with one another. In other words, each of the critical analytics could be described as forms of repurposed metrics in science and media monitoring, applied to social media.

That the study of engagement in media evolves with the advent of social media also holds here. For each of the critical analytics there are combinations of actors and language, with relationships between them that are plotted substantively, topologically, and stylistically and where the particularities are medium-specific. Thus, there are substantive hashtags, geolocated posts, and photos as well as memes expressed through filters. Moreover, the outputs of the analytics share a visual language with the medium from whence they are derived. There are word clouds, place marker maps, image grids, and other visualizations of the medium. Thus, the analytics and their outputs, while sharing provenances and features with metrics from science citation analysis and media monitoring, also contain natively digital objects whose means of measure are commonly referred to as analytics. Not just the posing of an alternative to vanity metrics but the study of engagement in issue work furnishes the critical attribute.

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