Article

Memes as games: The evolution of a digital discourse online

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Abstract
This study proposes a theoretical framework for understanding how and why certain memes prevail as a form of political discourse online. Since memes are constantly changing as they spread, drawing inferences from a population of memes as concrete digital artifacts is a pressing challenge for researchers. This article argues that meme selection and mutation are driven by a cooperative combination of three types of communication logic: wasteful play online, social media political expression, and cultural evolution. To illustrate this concept, we map Shepard Fairey's *Obama Hope Poster* as it spreads online. Employing structural rhetorical analysis, the study categorizes Internet memes on branching diagrams as they evolve. We argue that mapping these variations is a useful tool for organizing memes as an expression of the values and preferences embedded in online communities. The study adds to the growing literature around the subversive nature of memetic diffusion in popular and political culture.

As social media and the Internet continue to dominate the media landscape, scholars have struggled to understand how new media technologies are re-shaping political discourse.

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One area of growing interest is the analysis of memes, short bits of information that are easily reproduced and shared by large audiences. Memes have been explored in popular political discourse as 140-character Tweets, humorous gaffs from presidential debates, and "viral" topics in the news (Freelon and Karpf, 2015; Guggenheim et al., 2015; Leskovec et al., 2009; Mourão et al., 2015; Shah et al., 2015). Memes also represent many norms of digital culture, like peer-to-peer sharing, collaboration, and the recycling of cultural artifacts (Porter, 2013; Wiggins and Bowers, 2015). These various interactive behaviors, enabled by digital communication networks, may offer citizens a means to undermine elite influence of mass media (Benkler and Nissenbaum, 2006), mobilize political movements, and voice political dissent (Bennett, 2012; Hristova, 2014; Milner, 2013; Mina, 2014). In addition, the tools of digital culture allow individuals to adopt, counter, or re-appropriate frames and meanings embedded in political messages as they flow through institutional media sources, to the general public, and back again.

One phenomena underserved in this area is a theoretical and empirical account for how visual content mutates under certain circumstances. Some scholars argue that meme content reflects social interactions online that are essentially nonsensical (though affectively important to users; Katz and Shifman, 2017), or meaningless (Shifman, 2013). However, when a meme starts life as a piece of strategic political messaging, they spread and mutate according to communication logic governed by both digital culture *and* political culture. This study presents a three-part theoretical framework for understanding variation in the visual and textual content of Internet memes: games, political expression, and cultural evolution. As a political meme spreads, individuals engage in playful interactions that represent a re-appropriation of the original image according to some set of internal political schema, resulting in an active battle over the preferred meaning (Gamson, 1992; Price et al., 2005), and an attempt to express individual political preferences (Bennett, 2012). Over time, a political meme changes to reflect news events and popular culture experiences (like movies and television shows), and slowly diffuses in meaning away from political expression, toward humor, irreverence, and meaninglessness. These mutations, in turn, help keep the meme alive by building a sustained level of attention (Weng et al., 2012).

We apply this logic to the *Obama Hope Poster* used during the 2008 US presidential campaign. In a case study, an image of the presidential candidate begins life as an act of centralized political communication strategy, but becomes recycled and re-interpreted to reflect numerous competing narratives about the campaign, the candidate, and popular and political culture as a whole. The *Hope Poster* is an ideal case for observing meme behavior, since it began as a re-appropriation of political messaging by digital culture, and has flourished online over its decade-long life cycle. By analyzing a "dead" meme, researchers are able to better track thematic and visual changes over time. The evolving visual language of memes is a moving target for researchers. This article shows how online image search tools, guided by theoretical expectations, can be used to map memes for discourse analysis.

Memes and digital political cultures

Defining memes

Memes are fundamental features of modern society. They are, not only in the rather narrow sense of Internet memes, but also in a broad understanding of communication.

Richard Dawkins (1989) introduced the term in 1976 in the first edition of his book *The Selfish Gene* in order to apply the principles of Darwinian evolutionary theory to the evolution of culture and society. Dawkins theorized that genes, the basic replicating units in biological organisms, must have some equivalent in the process of cultural evolution, and thus coined the term "meme." However, Shifman pointed out that until today, the meaning of the term is highly contested and thus ambiguous (Shifman, 2013). He identified four distinct approaches: the *mentalist-driven* (Dawkins, 1982; Dennett, 1995), the *behavior-driven* (Gatherer, 1998), the *inclusive* (Blackmore, 2000) and the *memetic dimensions* approach (Shifman, 2013: 366–367). Important is the notion, to which we shall return later by looking at rhetorical structure theory, that there has to be a potential for imitation of the cultural unit (Shifman, 2013). In general, "a meme is an act or meaning structure that is capable of replication, which means imitation" (Spitzberg, 2014: 312). Furthermore, "imitation is, in essence, a process of communication, in which one social organism, group, or system engages in activity that represents an informational duplicate or derivative version of another act or meaning" (Spitzberg, 2014). In theory, certain memes are "selected" for distribution based on their environment. In the case of Internet memes, the selection mechanism can be thought of as *attention* or *saliency* (Weng et al., 2012).

When looking at Internet memes specifically, we can be more precise, and understand memes as "digital objects that riff on a given visual, textual or auditory form and are then appropriated, re-coded, and slotted back into the internet infrastructures they came from" (Nooney and Portwood-Stacer, 2014: 249). This definition is closely resembled to that of Shifman who defines memes as "units of popular culture that are circulated, imitated, and transformed by individual Internet users, creating a shared cultural experience in the process" (Shifman, 2013: 367). According to Katz and Shifman (2017), three distinct features of the digital environment are embodied in memes, which are important for the argument presented here: they are strongly connected to distinct digital communities (Miltner, 2014), they are based on the practice of remixing (Lankshear and Knobel, 2011), and they are first and foremost visual (Milner, 2016). This is important insofar as we are arguing that the playful use of memes are reflected in these dimensions. The digital community is encapsulated as a discourse around the meme, it evolves through remixing and finds its most prominent expressions in visuals, seasoned with verbal snippets. It would be futile to try to come to terms with the many different definitions of memes. All the different approaches, for example, mentalist- or behavior-driven, on memetics have their merits. However, for the present case, it is reasonable to understand memes foremost as concrete units, which can be studied empirically (Shifman, 2013).

Based on these definitions, the core operation of these processes is the permanent copying and re-coding of a pre-existing theme that represent a constant alteration of text and images into something similar, but ultimately conveying a distinct meaning. This alteration process can be best studied, according to Shifman, by analyzing the dimensions of "content, form, and stance" (Shifman, 2013: 367). Thus, we can draw an analogy, and propose that a meme is at the center of an evolutionary process in which meaning spreads throughout society, though not always quite in a way the original sender meant it. Communication is always an act of replication. When we write, we copy our thoughts onto paper, and thereby stipulate what we want to express in a fixed order of words. But,

in the very moment of writing, we know that our expression could have more than just one meaning, could be interpreted in more than just one way, and hence, not everybody will understand our expression exactly the way as we meant it to be. This uncertainty inherent in communication is variation. Our number of friends or colleagues, our wit, our access to social networks and their size, all act as selectors that determine how far the words we write (or the pictures we take, etc.) spread (Spitzberg, 2014).

Memes are very small concrete units of information. This decreases the time for cognitive processing and increases the speed at which images can be produced. In turn, digital technologies create a nearly endless resource for the meme producing communities, leading to a fast-track selective process in which the appropriate memes emerge to address specific problems, issues, and topics of discussion (Gigerenzer et al., 2011; Luechtefeld and Richards, 2016). Like nature with its lavishness, the digital culture produces vast numbers of memes, of which only a negligible proportion crosses the barrier into the public consciousness. Even though very few memes enter the public discourse, many more are created every day, though it is not entirely clear what criteria leads for some memes to go viral, and others to die (Weng et al., 2012). Benzon (1996) suggests that memes with "traits which enhance the quest for complex experience will survive, whereas those which do not will wither. The memes which most effectively embody those traits will be passed on, whereas others will be forgotten" (pp. 325–326).

Although these concepts have been discussed at length in the literature, scholarship on the particular mutations and spread of politically sourced memes is still in its infancy. We propose that, when a meme starts life as a strategic piece of campaign rhetoric, its life cycle is governed by a combination of factors: logic of communicative action and political self-expression on social media, irreverence and play in digital games, and finally, cultural evolution. The following sections cover these aspects in more detail.

Games, political expression and cultural evolution

Memes as games

The technological and social-interactive features of social media offer an alternative discursive space to influence public opinion. However, the motivations for content creation online are not usually political. Alternatively, several scholars suggest that insights from how online video games influence social networks and learning processes is another useful tool for understanding online behavior (Reer and Krämer, 2014; Trepte et al., 2012). Like online video games, people engage in the act of altering and sharing memes via social media, simply because they emerge in a playful process of collaborative interaction and play. When we use the term game, we do not refer to games in a narrow sense of a particular, set game. Rather, as Rowe puts it, games can be defined as "an abstract object (either a sequence or a goal) which is designed to have no instrumental value; the realization or pursuit of which is intended to be of absorbing interest to participants and spectators" (Rowe, 1992: 478).

Clearly, the process of recycling online artifacts often resembles the features of games: it is sequential (alter the meme but keep it recognizable), goal oriented (produce a meme and share it with the audience), and it is intended to be of absorbing interest. In

digital spaces, memes as games lack rigid rules on which all players have agreed upon. While many memes are produced just for the sake of producing them, many others appear to have been created with an instrumental value in mind. Therefore, we follow Manser (as did Rowe) and do not "think of games, but rather of the *activity* of playing a game" (Manser, 1967: 216). Note that for these authors, the term game is then less important, rather "it is the idea of 'playing', of not counting what happens" (Manser, 1967: 217). Thus, a meme can have an effect beyond the game, but this is not the main driver of the meme creation. It is a side effect that might be welcomed by some players. In other words, the "outcome" is less important than the experience of creating and sharing digital content.

Games help explain why individuals use memes in the first place. As Katz and Shifman (2017) argue, play is an essential part of building social cohesion online. When memes start as political media, they may also be governed by the logic of political affect. This is because social media offers an opportunity to express oneself, build an online political identity, and connect with others with shared interests (see, for example, Papacharissi, 2010).

Memes as social media political expression

The processes of meme selection and mutation online are indicative of a particular type of communication logic. As Bennett points out, modern political movements are shaped by a combination of cooperative and sometimes competing forms of communication logic (Bennett, 2012; Bennett and Segerberg, 2013). For example, modern protest movements tend to rise in prominence when they combine the mass appeal of a centralized communication strategy with the networking and connective features of social media (Bennett and Segerberg, 2013). This is important for how political memes might work, because a centralized campaign can reach millions, while the smaller networks of online communities select, alter, and spread imitations of the original message.

The selection and spread of memes at *the individual level* can be explained, in part, with scholarship on news effects and online expressive behaviors. For example, Scheufele (2004) argues that visual framing effects depend on individual cognitive schemata. The basic idea is that media effects depend on political preferences and past experiences of news exposure (Kosicki and McLeod, 1990). Media schemata influence levels of trust in the news, perceptions of bias, and whether or not a campaign ad will be successful (Gamson, 1992; Price et al., 2005). In the online world, the distribution, mutation, and saliency of a meme also depend, in part, on the characteristics of the individual who spreads the content (Correa, 2016; Hargittai and Walejko, 2008). Thus, Internet memes can act as a common frame, or reference point, for political discussion and action. This phenomenon is reflected in networked collective action movements, like Occupy Wall Street, and the 99% movement (Bennett, 2012; Hristova, 2014). Successful campaigns that rely on memes operate through so-called personalized action frames. The interpretation and subsequent recycling of an Internet meme is driven by frames embedded in the meme itself, while expression of a message reflects some aspect of the individual's media schemata.

Few studies have explored Internet memes as visual political frames (Hristova, 2014; Milner, 2013), and communication scholars have yet to address how participatory interaction with memes shape popular political discourse around a particular candidate or issue. Yet studies show that memes can have enormous impact on political discourse and public opinion. For example, Freelon and Karpf (2015) argue that memes shared on twitter during the 2012 presidential debates worked to undermine candidate Mitt Romney's official framing of funding for public broadcasting (the *I Love Big Bird Meme*), and challenged his campaign's treatment of women (*Binders full of Women*). Once a meme enters popular political sphere online, it can operate to subvert traditional reporting practices, and frustrate public opinion managers. Based on these findings—and the work on collective action frames based on media schemata—it is reasonable to suggest that memes work at the individual cognitive level in a manner congruent with political information dissemination, and accordingly, become powerful tools for the public to shape popular discourse around a candidate or issue.

We cannot infer individual motivations for sharing online content by simply looking at memes. Rather, the short, ephemeral bits of information transmitted through friend networks and online message boards operate as cognitive misers, engaging their audience through social and political cuing. By understanding that the selection process for certain memes over others is partly based on physiological features of the audience, we can better organize observations and infer meaning based on political expression and discussion. When combined with the notion of games and play, a pattern of meme diffusion should materialize that, although somewhat chaotic, incorporates features of both political expression and irreverence.

Cultural evolution and memes

A third and final component to meme evolution online is the function of cultural evolution in general. Humans have played for the sake of play long before the dawn of civilization (Huizinga, 1980). Most memes we encounter in the digital sphere are just pieces created for the sake of creation, and which are then shared within peer-groups for fun and enjoyment. However, as Huizinga (1980) points out, "all play means something" and therefore every act of playing bares the *potential* of being meaningful beyond the act of playing. Even though the player might not intend his playful expression to be more than just fun, it could very well happen to be. Every now and then, a meme crosses the barrier into the attention of a wider audience and starts to develop and procreate, as it is picked up and varied by other users. It is at that moment, when memes reach beyond the networks of peers that their expressive power extends beyond the act of play. Memes are thus part of "an environment in which rival frames seek survival" (Spitzberg, 2014: 315). Benzon (1996) developed a similar understanding on a much broader level almost 20 years earlier, when he wrote, "culture is an evolutionary domain in which paradigms evolve through the replication and variation of memes" (p. 321). But what does this evolutionary process look like, where a simple Internet meme comes to acquire such farfetched features?

Variation rarely occurs as an organized effort. Only through the wasteful process of play can individual memes evolve into meme-hypertexts. It would simply make no sense

for organized communication to allow too much variation of memes, since this would dilute the strategic message. As Kumar and Combe (2015) note, processes of play in the digital sphere "create an alternative space for social and political critique, outside the institutions of traditional media due to the proliferation of networked devices" (p. 211). While organized communication is mainly concerned with traditional media relations and the main platforms of social media, such as Facebook or Twitter, memes can dwell in the endless depths of the Internet, and thereby avoid the limiting conditions of the mainstream public arenas. Satire and parody become currency in this space, especially in authoritarian regimes (Mina, 2014), where ambiguity was (and still is) the only way to dodge censorship executed by the gatekeepers of the public. Thus, memes are not only acts of individual expression, they are also acts of subversive speech in a "risky game where parody accounts, mirror websites, fake usernames, and proxy servers allow participants to slip under the watchful radar of state agencies, that continue to finesse their skills at controlling and stifling online speech" (Kumar and Combe, 2015: 212). Participation and collaboration are necessary prerequisites for the emergence and virility of memes, but the cost of playing the game is relatively small. The small scale of individual expression through a single meme makes the collaboration of many essential. And as Tooby, Cosmides and Price (2006) have pointed out: "Where interactions are small in scale, joint efforts are routine" (p. 104).

Mapping the rhetorical structure of memes

The viral potential of memes, which is a precondition for public discursive relevance, is that they are part of a decentralized game, where the outcomes are usually irrelevant to the public. Play is governed by the logic of trial and error, make believe, and the waste of energy just for the sake of it. Social media is an ideal space for this process to play out, since individuals often play games online for the sake of social interaction (Reer and Krämer, 2014; Trepte et al., 2012). Only now and then does this play-like process see the emergence of memes upon which critical, competing frames, using the memes as a carrier, enter the popular public discourse. Since the content of visual memes mutate as they diffuse away from their original creator, structural analysis is an ideal tool to examine the relationship between memes as they flow through networks. Following this logic, the initial visual artifact (or potentially *any* visual artifact) operates as a kind of *condensation nucleus* in discourses. The images connect with each other, build upon, and relate to others; the universe of visual content related to the original meme slowly expands. Along the lines of rhetorical structure theory (Mann and Thompson, 1988), memes could be interpreted twofold: First, as single units of texts which are comprised of a nucleus, the core unit that carries the main message, and second, as one or more satellites conveying information related to the nucleus. One meme acts as a nucleus, and another meme as a satellite with regard to the nuclei. Whole groups of memes can be then categorized as a kind of hypertext in which the individual memes are connected through proximity to nuclei and/or satellites.

We suggest that meme-hypertexts evolve as nuclei and satellites begin to vary. An act of centralized visual communication strategy, like a campaign poster, is an ideal nucleus. As opposed to a decentralized act, campaigns have access to mass media, lend political

weight to a message, and are ideal targets for counter attack from oppositional narratives (Benkler and Nissenbaum, 2006; Blumler and Kavanagh, 1999). Satellite begin to appear in "orbit" around a nuclei as the message spreads from mass media to social media, and alterations in the content of popular digital artifacts reflect a playful, participatory political rhetoric of smaller audiences.

Case study: the hope meme

The *Hope Meme* has its roots in the iconic depiction of Barack Obama by artist Shepard Fairey during the presidential election campaign in 2008. The *Hope Meme* is an ideal case, since it shows almost all traits of the meme game as we described it: the meme (1) inspired thousands of replications, thereby involving; (2) a vast number of users participated in creating their own replications, the process; (3) started as a centralized communication campaign, and diffused into less centralized networks, with the *Hope Meme* being the only common ground; and (4) some (not all) meme fragments critically engaged the politics of the Obama administration. And most important: The memetic dimensions as outlined by Shifman (2013) are relatively easy to analyze and identify in this case, since form, content, and stance of the replicated digital objects share obvious commonalities. Hence, the cues that mark the descendant memes, are easy to find.

The subsequent sharing online transforms Fairey's work as it is used in new contexts, with novel (and potentially oppositional) meanings. Hope is also an ideal rhetorical trope for the recycling of meaning. Hope, as Tabboni (2006) points out, is an ambivalent concept, evoking personal interpretations and the release from certainty (see Castells, 2009: 377). Castells (2009) argues that Obama himself embodies this ambiguity, introducing a vision for the country without offering a means to achieve that vision. The lack of certainty allows individuals to "fill in the gaps" for how the new president would achieve his goals. Thus, the notion of hope is a mechanism of uncertainty, one that allows supporters, as well as political opponents, to cast their own narrative about the Obama presidency by creating new versions of the Hope Meme itself. While our main concern is to trace and grasp the patterns that emerge in the process of memetic evolution of the Hope Meme, it is only natural that these insights also relate to the underlying political discourse and thus, to American political culture.

Expected outcomes

Employing a structural discourse analysis to the *Obama Hope Poster*, we expect to observe a number of features of online memetic discourse, as expressed in the digital objects. First, the meme should begin as a campaign icon. Second, we expect much of the initial spread and mutation to cluster around political dissent, re-appropriation of the candidate's messaging, and reflect political expression in general. Third, as the meme lingers and spreads online, we expect the memetic objects concerned with political discourse to be gradually replaced by the logic of games, fun, and popular culture. Even though we cannot proof these hypotheses with exact empirical findings, analogue patterns should emerge.

Structural rhetoric and content analysis

First, the sample was collected with a combination of Google image search and Flikr searches, using the search terms "Obama," "hope," and "meme," using an explorative approach. Search tools offer several advantages for collecting content online. In particular, the algorithms that search, sort, and return results act as a proxy for the *saliency* of content online (Cilibrasi and Vitanyi, 2007; Huang et al., 2011). Using search tools to return samples also help eliminate some of the inherent problems in analyzing potentially infinitely large datasets, since the key words help define the sample parameters (Boyd and Crawford, 2012). Second, we employ two variations on a branching diagram, or evolutionary tree, to help guide an iterative approach to the data collection and coding process. The diagram represents the spread, and mutation of a message as it travels across discursive environments. Our intention is not to give an assessment of the state of the art of the memetic political discourse. Instead, we use this case study (1) to illustrate our point: Memes are one playful, oftentimes wasteful, and collaborative expression of political discourse. Furthermore, we intend (2) to develop an empirical approach on how to study the evolution of memes. We cannot provide insights on effects or impacts of memes on political discourse. And most of all, the case study is by no means representative of the memetic evolution of the meme beyond Flikr.

In the first diagram (Figure 1), the original campaign poster serves as the nuclei, while variations spread along the satellites, or branches, sorted first by theme, then by time. Once images are sorted according theme, symbolism, and other common attributes, we interpret the clusters of images as they sort on the branches (based on Glaser, 1965; Mann and Thompson, 1988). In the second diagram, the same approach is applied, but in the diagram the memes are also sorted according to their time of origin, based on timestamps and keyword searches, provided by the search functions in Flikr. The time stamps add an additional layer of verification for the sequential nature of mutation.

According to Dawkins (1989), memes may be categorized trough *longevity, fecundity* and copying *fidelity. Longevity* can be understood as the time span a replicating pattern survives (Heylighen and Chielens, 2009). *Fidelity* is then the effort it takes in order to replicate a meme. The easier the replication process is, the better are chances that it will spread. *Fecundity*, finally, refers to the potential a meme has to attract a large number of recipients. Spitzberg (2014) labels the same characteristic as *popularity* and adds with *velocity* a fourth category (p. 318). In Spitzberg's model, these four characteristics form the meme efficacy (Spitzberg, 2014). Structural rhetorical analysis (Mann and Thompson, 1988), is an ideal method for categorizing online texts according to Dawkins' categories. The nuclei and the satellites within a meme, and across a meme hypertext, are then the determinants of the value of the three (four—if one counts velocity) main characteristics of memes, which in turn are the predictors of a memes chances to thrive.[1]

The hope meme

Using the Obama Hope Meme as a case study, one can easily identify the Obama figurehead in the meme as a nucleus. Added text strings such as riffing on the text "hope" or the image itself, the iconized depiction and coloration serve as satellites to the nucleus.
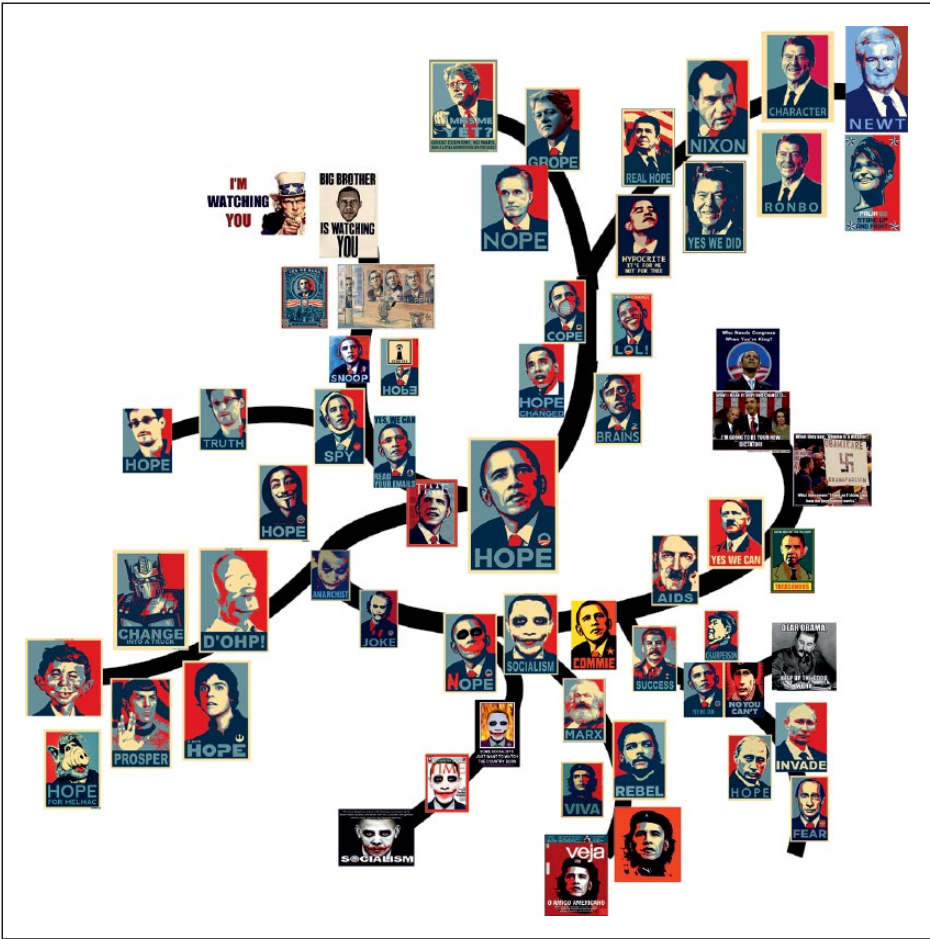
Figure 1. Branching diagram of diffusion and mutation of *Obama Hope Meme* according to Google search terms "Obama," "hope," and "meme." The campaign poster is the nuclei, and satellites are arranged by connections between text, color, figure head, and themes.

Beginning with the original meme, it is possible to follow the memetic evolution by analyzing the change of the nucleus and its satellites. Three common features link the memes together throughout the coding process: text, color, and figure head.

The memes in Figure 1 are clustered thematically based on their emergence in a Google search. This allowed us to reconstruct the development path of different meme clusters, leading to very different outcomes. As the images mutate, sorting on branches develops an understanding of the networked structure within which memes are related to each other. In effect, this resulted in some form of meme biography. Initially, the hope posters had been part of the communication strategy of team Obama and the Democratic Party. However, thousands of users captured the image in the aftermath of the campaign and turned it into a fast spiraling meme that provided almost endless links for further

(critical) debates. As Figure 1 shows, the variety of evolved meme fragments covers a vast range of issues. Republican supporters turned the image into displays of republican politicians, such as 2008 vice-presidential candidate Sarah Palin, or the republican patron saint Ronald Reagan. The schematic style of the original has inspired countless replicas with regard to popular culture: Luke Skywalker in Star Wars, Mr. Spock, Homer Simpson or the notorious villain from the Batman comics, the Joker. Especially the hybrid between the original Hope motif and the Joker shows, how the creative playful process evolves into a counter discourse. With only a few alterations, the *Hope Meme* changes into a *Fear* meme, which it was to political adversaries presumably from the beginning on. The hybrid between the Joker and Obama stands suddenly for anarchism, socialism, communism and even fascism. The meme becomes a projection screen for even irrational fears and attitudes connected to Obama. As farfetched as it might seem, in this process the transformation from hope into fear, from Obama into Hitler (or Stalin, or Mao) is just a few steps of alterations. It is the discursive expression of individuals who really believe that the Affordable Care Act, commonly referred to as Obamacare, is evidence for fascism, with Obama being an American dictator.

After developing a basic understanding of how memes evolve in digital environments, we began to map the Obama Hope Meme in order to provide a more comprehensive overview on how it spread, than just using the random results presented by Google (see Figure 2). We thus turned to Flickr, where images are provided with a date of upload. Thereby, we were able to track the development of the meme from its *birth* in 2008 forward, by collecting all memes in the Flickr database. The original poster first surfaced on the platform on the 28 of January 2008. We collected all memes that were uploaded until November 2015, all in all 394 items, of which some were exact copies of the original and others were strongly varied descendants. We then tried to cluster the memes according to their theme. During that process, four main themes emerged which we labeled as *organized discourse*, *alternative discourse*, *popular culture* and *individual culture*. These dimensions are to be understood purely in terms of the digital object itself, that is, these categories relate to features that are common among the different replica of the original memes. Therefore, the organized discourse refers to memes generated by the Obama campaign and the Democratic Party, alternative discourse means alterations that sustain a political meaning but not as originally intended by the Obama campaign, popular culture refers to memes were Obama is replaced by figures taken from pop culture, and individual culture includes memes were individuals style themselves in the shape of the Obama Hope Meme.

Both in organized and alternative discourse, many memes feature the original or only slightly altered figurehead. Where the figurehead is completely changed, the satellites are relatively unaltered and thereby preserve the link to the original meme. Besides the obvious satellites, such as color and text, context as could be derived from the meme implicitly (e.g. the British elections 2010), also emerged as a satellite category. Thus, the different forms of organized and alternative discourse show memes that keep either the nucleus intact or at least recognizable, or that feature a set of satellites that closely resemble the original, while circulating around a different nucleus.

The alteration process in popular culture and individual culture show much more distant forms of variation. In both cases, all memes feature a different nucleus than the
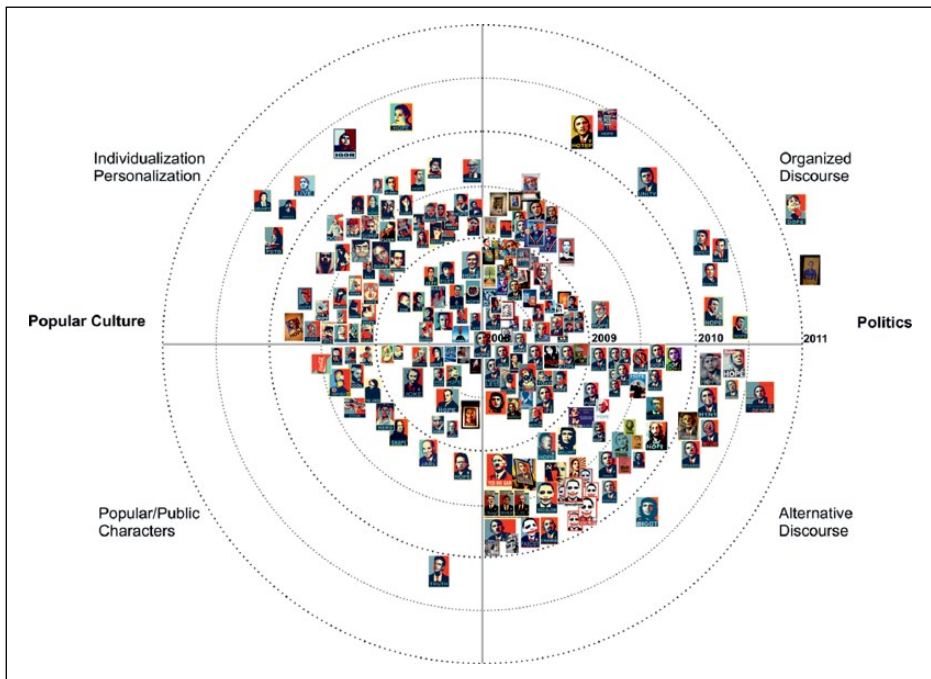
Figure 2. Branching diagram of diffusion and mutation of *Obama Hope Meme* according to Flickr search terms "Obama," "hope," and "meme." The campaign poster is the nuclei, and satellites are arranged by connections between text, color, figure head, and themes, with the addition of time stamps.

original, leaving the door open for much broader variation, but also weaker links to the original meaning of the meme. The case of Joker meme shows how popular culture provides a creative influx on alternative political discourse, since the Obama nuclei later resurfaces in the alternative discourse as a mixture of Obama and the Joker. However, such cases are presumably rare. Most memes that could be sorted into the popular and individual culture themes appeared to be created for the sake of creation—and rather seldom as an act of political expression.

Hence, Figure 2 shows that memes do not evolve just randomly in the digital sphere, but in dependence of their discursive environment. That would explain why organized and alternative discourses show much more memes with not or only slightly altered nuclei, since the nucleus as the core carrier of the argument is needed to connect upon.

Discussion

This study argues that replication of visual content online is a product of two motivations for sharing content online: expressive acts of political participation and games. This helps explain how memes evolve as they travel through different discursive environments. Mapping these categories as an evolutionary process, bound by

Figure 3. Variations of the *Paul Ryan AHCA Meme*.

structural rhetorical relationships, reveal the competing political, social, and popular frames of meaning in online public spheres. In addition, the analysis shows a complex universe of content, reflecting the cognitive processes of millions of networked players.

Only very few memes attract a larger number of people who themselves start to spread the meme further. Even fewer memes cross the threshold into the public consciousness and become a symbol being associated with an entire movement, like the Guy Fawkes mask in the case of Occupy, or, as discussed above, the *Hope Meme*. But in principle, our approach could be applied with any meme. The categories emerging from meme mapping, as introduced here, reveal the kind of wastefulness of the play-like process that constitutes its critical potential. As shown in Figures 3 and 4, the very patterns that we were able to identify, are present in other, more recent memes as well.

The *Paul Ryan AHCA Meme* emerged after a *Washington Post* journalist posted a photoshopped picture of Paul Ryan, Speaker of the House of Representatives, on Twitter. The images shows Ryan during his Powerpoint presentation on the replacement of the *Affordable Care Act* (ACA)—commonly known by his memetic label *Obamacare*—by the *American Health Care Act* (AHCA)—maybe soon commonly known by the memetic label *Trumpcare*. Within hours after the original post on Twitter, dozens of users created their own memetic versions of Paul Ryan's presentation, including themes of popular culture (The Arrival, Pink Floyd), domestic politics (Trump tweet), party politics (Republican health care plan) and foreign affairs (Benjamin Netanyahu speaking at the United Nations). As in our case study of the Hope Meme, one can easily follow the alterations of the memetic satellites (Pink Floyd, Trump Tweet, etc.) and the transformation of the original nucleus into a satellite and his replacement by a new nucleus

Figure 4. Variations of the Donald Trump signs executive order meme.

(Netanyahu). And again, a similar analysis could be made of a meme such as the *Donald Trump signs Executive Order Meme* (see Figure 4), and many more.

Memes, like the *Hope Meme* (and the *Paul Ryan AHCA Meme* or the *Donald Trump signs Executive Order Meme*) are easy to memorize. And for subsequent replications it is easy to tap into this reservoir to connect with existing themes and issues. The maps clearly show how relations between artifacts may be driving evolution of content as it spreads through smaller, individualized content expressive networks.

One key finding is how search tools may be used to identify saliency of messages, and diagramming these results according to discursive space reveals clear patterns of political self-expression online. The searches returned several complex content play that combine popular culture with political culture. In this vein, nearly half of the replications include Obama as a murderer and sociopath; memes often combine Christopher Nolan's particularly violent incarnation of the Joker character with fascist iconography. This reflects an extreme interpretation of the hope and change narrative, one where oppositional narratives reflect a rather bleak view of presidential politics. In contrast, as the meme incorporate more benign characters from popular culture, like Homer Simpson or Luke Skywalker, they tend to be less political overall.

Studying Internet memes as political discourse introduces several theoretical and methodological challenges. First, many different theoretical frameworks have been offered to guide both quantitative, and qualitative research designs (Aunger, 2002; Blackmore, 2000; Shifman, 2014; Spitzberg, 2014). One useful finding here is the convergence between elements in Figure 1 and Figure 2. For example, around the time of the

Dark Knight Rises movie (2008; Figure 2), clusters of memes appear as the Joker character. These memes are also clustered in the thematic structure in Figure 1, spawning evolution toward hyper-texts of violence. These convergences suggest that the evolution of memes, based on changes in the popular and political mass media, is a worthy framework for analyzing meme content.

Implications and further research

For visual communication scholars, developing a method for exploring the vast range of images available on the Internet would be useful for exploratory studies in discourse analysis. In an era of so-called big data, it is easy for the researcher to become quickly overwhelmed. The approach introduced here offers the benefits of classic, iterative content analysis methods, while incorporating contemporary theories of content creation and political expression online.

We were able to show that memes emerge and replicate in thematic patterns and that they can be ordered along the lines of discursive types. Memes are organization from disorder (Winkler and Seiffert-Brockmann, 2016). With their subversive nature they transcend the organized arenas of the public sphere and dwell where authoritative texts (see Bencherki and Cooren, 2011) never could, because memes that are authoritative are no memes. The *Obama Hope Poster* was a claim to authority over the public political discourse in the forefront of the 2008 presidential elections. The moment the poster became a meme, it lost that claim, because it was now alterable and thereby uncontrollable. In the 21st century, online memes appear as a new force, unknown in the days before the birth of the Internet. Quite the opposite is true. In the communist regimes of the 20th century, the slogans that came out of party conventions—which were meant to be authoritative texts—quickly turned into memes in the gestalt of jokes. On the basis of such tiny cultural units, people were able to distinguish friend from foe, to connect to discourses that had no place in the communist public sphere.

The Internet is not the cause for the emergence of memes—it is a particle accelerator for memes. For scientific research, the Internet makes memes accessible and measureable, since they are now visible everywhere. In the pre-Internet era, memes meandered—for the most part—in the private—and thus hardly observable—space of personal interaction. Nowadays, they are trackable and observable everywhere online. With memes it is possible to map political discourses far beyond the scope of mass media and organized communication. The possibility of the rise of Donald Trump was already visible in the alternative memetic discourse around the Obama Hope Meme back in 2008. Thus, the study of memes enriches the understanding of the emergence of political discourses before they enter the consciousness of the public sphere. Many analyses of political discourses and political communication in general rely on mass media content, be it as the basis of content analyses or as the foundation for political literacy of citizens who are surveyed. Thus, analyzing memes also sheds light on the unconscious parts of political discourses and the conditions in their nursery stage. To analyze discourses from a perspective of play furthermore enables researchers to better understand the logics that guide these processes in the stages of emergence.

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Note

1. Actually, one could go as far as to understand fecundity, longevity, and fidelity also as characteristics of nuclei and satellites, what would make them memes in their own right. However, not every word, to take one example, is a meme. However, some words surely are. This example shows, how difficult it is to establish, what the smallest unit of reproduction is.

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