**#INSERTDIETHERE: Tracing the Techno-Linguistic Associations of Dietary Hashtags on
Instagram**

**by
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**Thesis submitted to the Faculty of Graduate and Postdoctoral Affairs in partial fulfillment
of the requirements for the degree of**

**Master of Arts
in
Communication**

**Carleton University
Ottawa, Ontario**

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Abstract

The use of hashtags on social media platforms allows users to navigate vast repositories of information with ease – hashtags technologically mediate as they both enable and shape user experience. This research focuses on the photo-sharing platform of Instagram and the phenomenon of dietary hashtags (DH: singular; DHs: plural) – for example, #healthy, #glutenfree, #vegan, and #whole30. The circulation of these hashtags is analyzed to explore if and how they can influence users' understanding of diets and eating practices.

The study uses Actor-Network Theory to describe the performances and impacts of DHs within a technologically mediated space of social media. Through experimenting with the walkthrough method and an Instagram narrative model, the thesis observes discursive associations in dietary-related Instagram content. Sample case studies look at the ways in which Instagram has enlarged the sphere of possible associations, which consequently alter food and diet related acts.

DH discourses and the ways in which they impact dietary visibility, proliferate dietary belief systems, intentional DH performances (user subjectivities), and dietary-based social/communal affiliation (intersubjective discourse) are first considered separately. The results indicate that Instagram supplements and even displaces food-related acts. Moreover, Instagram creates a virtual environment in which visual and linguistic dietary discourse is performed; thus altering how users learn about food practices, as well as enabling the making of dietary-based associations. The thesis concludes by linking these elements and details how these components assemble in the making of a dietary techno-cultural space.

Acknowledgements

Irena Knezevic, I cannot thank her enough for being the best and most flexible supervisor. Our office chats, the writing group, and those long car rides have been invaluable to me. She really has been my rock throughout this process.

However, I can't forget the rest of my cheerleaders.

I want to thank the rest of my committee, Rena Bivens and Michael Mopas. Both Rena and Michael asked me those tricky questions you wish you didn't have to answer; however, they made me think and gave me future direction for my research. I could not ask for better committee members. I also want to thank Merlyna Lim. Although she is not officially on my committee, she has shown me the ways of 'Jedi API.'

The whole Communications faculty, including the wonderful Coleen Kornelsen, has helped me along the way. Thank you.

I need to thank my partner Hadi. If it wasn't for him, I don't think I could even find my shoes. He has supported me, listened to me endlessly rant about Actor-Network Theory and hashtag /semiology, and he's helped me when disaster happened (laptop failure, car accident).

I also have my mother, Chantale Courcy, and my father, David Pasho, to thank. They always taught me to strive for what I wanted. They were the ones who encouraged me to ask questions and to remain critical. They were also the ones who, even though I thought everything was hopeless, told me that there is always a way to 'skin the cat.'

I also need to mention my communication support group. All of the graduate communication students have been so supportive. Stephanie Ritter has shared my love with Instagram analysis and has helped me pursue future academic ventures. My MA cohort has provided me with the necessary stability; balancing both life and school. Also, in terms of social stability, I can't forget to thank my 'Monday Funday' crew.

Lastly, I want to thank my sisters. Jessica (youte) and Samantha (fish). I am in the middle of the best sister sandwich ever. They have been so supportive throughout my life, including this milestone. I love you both.

Thank you all.

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CHAPTER 1 INTRODUCTION

As of December 7th, 2016, there are 84 740 590 unique Instagram posts with the hashtag #healthy on Instagram. Of these, many dietary modes, represented by a hashtag, are associatively depicted with #healthy. This phenomenon, therefore, begs the question: do dietary hashtags (DHs: plural; DH: singular) alter the ways of dietary learning? Even though many of the popular diets (e.g. gluten free, paleo, etc.) do predate the Instagram social media app, the number of food-related posts when searching #healthy and other hashtags (e.g. #foodporn) demonstrates the impressive presence of dietary representation on this social media platform. Memes about Instagram users' fascination with taking and posting pictures of their food are widely circulated on the web, thus demonstrative of the phenomenon of food documentation on Instagram. Such memes include "Instagram is down, just describe your food"; "I ate some delicious food. FALSE. You didn't Instagram it"; and "What if I told you, You can eat without posting it on Instagram." Instagram is a visual hub filled with pictures of food, and to no surprise, it is also utilized as a way for users to share their food modalities by using hashtags to display their specific dietary beliefs. Although the users' dietary practices may have pre-dated their Instagram profile, I nonetheless contend that DHs have a role in dietary learning; that is, DHs can influence user beliefs, as well as be a performance mechanism of representation on Instagram¹.

The role of hashtags on social media has been of interest in recent scholarly literature, many contending that hashtags operate as a new techno-linguistic device. Sanjay Sharma (2013) takes Deleuze and Guattari's (1987) concept of assemblage to explain the phenomena of Black

¹ It is important to note that DHs can play such roles on other social media platforms. However, this research focuses on DHs and Instagram.

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Twitter. Similar to this study's position on the role of DHs, Sharma contends that "Blacktags are instrumental in producing networked subjects which have the capacity to multiply the possibilities of being raced online" (p. 46). Far from the hashtag being merely a mechanism to categorize posts, the collective ordering of hashtags on social media casts them as emergent phenomena. They are materialized, given meaning, and made visible through associations produced by the network propagation of a given hashtag (Sharma, 2013). In the context of the role of DHs, hashtags can inform a user's performance to the effect that a user's belief in a topic or subject can change when confronted with what the hashtag makes visible to him/her. In this sense, a DH propagates and aggregates. It enables the user to perform their identity on social media to align him or herself with an assembled ad hoc public they wish to emulate and/or be part of its communal aggregation. This insight opens up a research avenue for a new way of thinking about the entanglement of dietary mythologies/beliefs, 'DH communities', and the technological network.

In this research, my research questions identify that DHs are significant in their use, and each DH utterance signifies a symbol of identity or an affiliation with a way of eating (i.e. a dietary collective). The list of DHs is inexhaustible, but includes the gluten free diet, the paleo diet, the keto diet, the vegan/vegetarian diet, the 100-mile diet, preferences for organic and 'whole' foods and so on (known as #glutenfree, #paleo, #keto, #vegan, #vegetarian, #100milediet/#localfood, #organic, and #wholefoods). I am not making a value judgment on any food modality; I am trying to uncover the role of DH in an emergent dietary phenomenon. The value of a DH is contingent on the assemblage of associations in the network. The "you are what you eat" mantra is placed into linguistic application on Instagram. Although DHs are only part of

the emerging phenomenon of dietary behavior, a user's pattern of thought about eating practices can be influenced by what Instagram makes visible by hashtagged content.

I use Actor-Network Theory (ANT) (Latour, 2005, Law, 2009) as a guiding point to describe the associations made between users by the vehicle of the DH. Following an ANT way of thinking about DHs and their role as identifier and promoter of a dietary belief, Instagram dietary publics are made emergent. As such, the network structure and associations mediated by and through DH are dynamic. These dietary communities are constantly in the processes of 'being made' (territorialized) by each iteration of the DH (the relations that constitute forms of online content of the communal territory and expression). As a result, these DH communities can expand but at the same time they can also be un-made (deterritorialize)², segmented, or progressively decrease in size. For example, there was a peak in the 'Atkins Diet,' which over time eventually saw a decline in the number people adhering to this dietary belief.

Once these links are made visible to the actor, they can either chose to accept or reject the DH by either modifying their own dietary practice and thereby perpetuating the DH in their social media discourse (becoming part of the dietary collective), or by rejecting the DH, which can either make the user not employ the DH or create a counter-discourse (or counter DH such as #notpaleo). The description of the movement of the DH and how this affects the other actors in the network does not grasp the entirety of the network and the links within the network that contribute to dietary behavior. I seek to show that the DHs do have agency on individual dietary

² 'Territorialized' and 'deterritorialized' come from Gilles Deleuze and Felix Guattari's work on assemblage, which is consistent with an ANT way of thinking about emergent aggregates through heterogeneous associations. For a full account on assemblage, see *A Thousand Plateaus: capitalism and schizophrenia* (Deleuze and Guattari, 1987). For a realist ontological account of assemblage theory, which is arguably more compatible with ANT, see Manuel DeLanda (2006) *A New Philosophy of Society: Assemblage Theory and Social Complexity*. See also Martin Muller and Carolin Schurr (2016) *Assemblage Thinking and Actor-Networking Theory: Conjunctions, Disjunctions, cross-fertilization* for an examination on what can be gained if an ANT theorist works with assemblage theory.

behavior (as propagators of information) as well as are identity markers (embedded with semiological connotations). However, I also acknowledge that there are other associations within the network (i.e. other interpersonal communications and other media outlets) that either increase or decrease the network effect of the DH. To my knowledge, there has been no investigation into hashtags that use the lens of Actor-Network Theory; however, there are observations made in the academic literature for both dietary mythologies/practices as well as hashtags that are consistent with an ANT perspective. This research includes Sharma's (2013) study on racial hashtags in the techno-linguistic assemblage of race and identity and Zappavigna's (2011, 2014, 2014b, 2015, 2016) work on the use of hashtags in the performance of identity and affiliation. Although these cannot directly inform this present study, they act as component parts to help describe the links and associations made on Instagram through DHs³.

This research develops on these themes of the use of hashtags in social media. However, it specifically identifies the contribution DHs have in the sphere of Instagram. The following section details the literature review on food/diet studies, as well as literature detailing current hashtag studies. Following the literature review, I list the research questions under review. In chapter 2, I detail the methods used to analyze the significance of DHs in social media performances. Although there are notable contributions in social media hashtag studies, none develop a comprehensive method that looks at the impact of DHs in Instagram discourse. The methodological contributions of this study help develop the area of Instagram studies, and hashtag studies more generally. Chapter 3 delves into the first two research questions, which examine the narrative functions of DHs on Instagram; most notably as enabling culinary learning and a place for mythological sharing/making. Chapter 4 continues to explore the narrative

³ The articles do not analyze DHs or dietary performances on social media. These sources do however inform methods in hashtag analysis.

function of DHs, with a strong focus on the discursive role of hashtags in the making of the individual (the subjective 'I') and in the making of a dietary based digital communal (a shared intersubjective). Chapter 5 then dovetails the research questions to provide a conclusion on the state of Instagram, which asks if Instagram is a cultural sphere in dietary-related activities, and describes the ways in which DHs are intertwined in the making of a new culinary-cultural space: this includes both learning and the making of the 'I' and the communal through food-related acts. The exploration of these questions illustrate that there are consequences and changes to food-based practices since the introduction of social media. In particular, the public display of food content (documenting/sharing ones eating practice) on Instagram and the adoption of DHs in Instagram vernacular in an example of the ways in which food and diet are becoming a virtually-made ritualistic process. Not only this, DHs are indeed a mechanism which encourages dietary learning, and enables for the formation of a new techno-cultural: the role of food in diet in society is now connected to the virtual environment.

1.2 Literature Review

The literature review is composed of two major themes: hashtags and dietary beliefs/mythologies. Current scholarly work does not bridge these together, as such, I have separated the key information on both these topics. First I begin with identifying the focus of the research, that is, the hashtag. Then I turn to what has been written on dietary beliefs and dietary collections to join these two bodies of literature meaningfully and to examine and trace the phenomenon of dietary patterns made emergent from DH on social media, with a focus on Instagram.

1.2.1 Hashtags in Academic Literature

The debut of hashtags on social media was on August 23rd, 2007. Chris Messina proposed to use the hashtag, similarly to how it was used in Internet Relay Chat networks (IRC)⁴, to be a way to systematize posts (tag topics of interest) on the microblogging website Twitter. Messina was a former Google designer, and in 2007, he co-founded the consulting company Citizen Agency, which focused on using social media concerning open-source practices and values (Doctor, 2013; Edwards, 2013). Messina's initial post on Twitter read as follows: "How do you feel about using # (pound) for groups. As in #barcamp [msg]?" At first, the idea was rejected by Twitter. In a phone interview with *The Wall Street Journal*, Messina explained to the journalist: "[Twitter] told me flat out, 'These things are for nerds. They're never going to catch on,'" (Zak, 2013). However, in October 2007, during a series of San Diego forest fires, users began using #sandiegofire to tag posts that dealt with this issue (Zak, 2013). It proved to Twitter that hashtags were, in fact, being adopted by Twitter users even though not officially sanctioned. In April 2009, Twitter added a search where people could look up both @USERS and #HASHTAGS. On July 2nd, 2009, Twitter made hashtags hyperlinks, whereby clicking on them redirected the user to posts with that same hashtag. Although originally intended to help categorize and search posts on Twitter, other social media websites also adopted the hashtag to categorize and create user-generated metadata. Facebook, YouTube, and Instagram now all use the hyperlinked #_____ to generate a folksonomy database (see below).

The intent of the hashtags on social media (as it was for Internet Relay Chat Protocols) was to categorize posts and to make posts searchable through these hashtagged words/phrases.

⁴ Most of the literature is about the history of the hashtag links its origin story to IRC. However, for a full review on the # symbol, see Nathan Rambukkana *From #RaceFail to #Ferguson: The Digital Intimacies of Race-Activist Hashtag Publics* (2013, p.160-161). He succinctly unpacks the iconic octothorpe (#) symbol and its path towards being appropriated as a communicative function on social media.

Michele Zappavigna (2015) calls this ‘searchable talk.’ However, as the author has observed, “hashtags are able to construe a range of complex meanings in social media texts” (p. 274). As such, studies on hashtags understand the hashtag as a complex marker that has other linguistic functions and properties beyond just that of a tool that systematizes user-generated data. For example, Ellis et al. (2015) have observed the dual function of the use of hashtags on Twitter: “Twitter’s ability to provide dynamic real time information and organize that information through its hashtags and associated metadata also allow it to act as an alternative broadcast mechanism in its own right” (p. 22). Further inquiries into the linguistic function of the hashtag on social media have also linked it to visibility, community, and identity. Hashtags are both systematic and semiotic.

1.2.2 Hashtags: The Social Networks Linguistic Mode

Adam Mathes (2004) explains that social marking (hashtagging) leads to a metadata-based collection of materials that indicate a folksonomy – that is, a user-generated tool of organizing and describing information at a metadata level. Highfield and Leaver (2015) note that the hashtag as folksonomy metadata “is emergent in the sense that it is always in the process of being generated by users and update by new contributions,” which is a “collectively produced alternative” to taxonomy (para. 15). As Halavais (2013) explained, hashtags are “... a way of indicating textually keywords or phrases especially worth indexing [...] by using the # character to mark particular keywords, Twitter users communicate a desire to share particular keywords folksonomically” (p. 36). However, as noted by Highfield and Leaver (2015), the folksonomic characteristics of hashtags extend beyond the platform-specific social media site of Twitter since they are meaningfully integrated into other social media platforms (Instagram, YouTube, Facebook, and Tumblr) and have become common in other verbal and textual vernacular. Once a

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subsurface coding element in C++ programming language, hashtags are now visible on the user level; as such they dominate and organize discourse on social media platforms.

The overwhelming presence of hashtags in social media, therefore, needs to be included in the linguistic analysis of online communication patterns and is “worthy of more research” (Rambukanna, 2015, p. 161). Moreover, some scholars, such as Gehl (2015) have noted that the hashtag has even transgressed the boundary of being unique to social media discourse. He explained that “the use of the octothorpe (#) in hashtags is now part of language, as when someone leaving a party says ‘hashtag I’m out,’ evoking ‘#imout.’” (p. 61).

In Michele Zappavigna’s (2011) investigation of #obama, she found that hashtags serve a linguistic and communicative function. In particular, hashtags are technologically discursive tools that make possible “ambient affiliations” (p. 801) and the creation of “ad hoc social groups or sub-communities” (p. 801). Drawing from Zappavigna’s research, Rambukanna (2015) concludes that hashtags act “as both text and metatext simultaneously, drawing discourse together across technologies in a way worthy of more research” (p. 161). Although these contributions into hashtag linguistics are noteworthy, Sharma (2015) cautions against over-generalizing the social characteristics of hashtag community formation since the role that the hashtag plays in social media communication can differ in practice, among platforms, and among communities/structures. For this reason, researchers are cautioned to examine the specificity of the hashtag and apply methods that are representative to the particular phenomenon under observation.

As such, Michele Zappavigna (2015) and Ash Evans (2016) consider some alternative linguistic affordances of hashtags. Both authors exclusively focus on the communicative behavior of hashtags on Twitter. Zappavigna notes that “while popularly thought of as a topic-

marker, hashtags are able to construe a range of complex meanings in social media texts” (2015, p. 274). Zappavigna suggests three communicative functions for hashtags: marking experiential topics, enacting interpersonal relationships, and organizing text. The communicative function of a hashtag does not necessarily operate exclusively in one category; a hashtag may have a shifting communicative purpose. Evans (2016) concludes that hashtags are employed by users as a tool for mediated self-expression and is a symbolic vehicle of identity construction/stabilization. Considering the hashtag as being linguistically versatile in social media allows for a deeper consideration of the hashtag as a meaningful linguistic technological device that impacts interpersonal relations and identity formation, organizes opinions/group beliefs, as well as acts as a means to propagate information (whether it be factual or not).

Other studies have concluded that hashtags have a role in constructing a hierarchical order in social media. Ruth Page (2012) found that the construction of a ‘hashtag hierarchy’ is discursively constructed through the interactions on social media, which includes the level of engagement with a specific hashtag and the formed associations of a hashtag with the other actors in the network (other hashtags, users, algorithms, specific social media platform). In this instance, associating oneself with appropriate hashtags contributes to the users’ overall linguistic and identity capital. Because hashtag asserts a certain associated identity with the user engaging with that hashtag, it affords itself to be a powerful tool in online performance and self-mediation. Unlike Zappavigna’s (2015) classification system based on hashtag linguistic function, Page (2012) classifies hashtags in three ‘grammar types’ based on clause/content type surrounding the hashtag in use: declarative, imperative, and question. No hashtag is specific to one of these three categories, what matters is the content or clause associated with the hashtag. Regarding hashtag engagement and propagation, her research indicates that it is false to assume that social media

platforms are necessarily participatory or dyadic. Rather, hashtags can perform in the imperative and declarative form to propagate its use and influence the user to engage with this hashtag. Page (2012) states that this is particularly true for celebrity and micro-celebrity accounts, which use hashtags to “seek to persuade the addressed audience to engage with the promoted commodity” (p. 198). In this sense, when looking at hashtags engagement, researchers need to look at the key ‘influencers’ propagating engagement with the hashtags. ‘Influential’ social media users would be a user with a high number of followers, therefore increasing the potential of hashtag visibility. These influencers are also important in framing the hashtag semiotic. In other words, the way in which the hashtag is represented in posts instigates an association with a way of being.

The study of Twitter is the bulk of the scholarship on communication, hashtags, and social media. Research areas include an investigation on the communicative roles that hashtags have on Twitter-based activism (social movements); such as #blacklivesmatter (Freelon, 2016) #occupy (or its variations #ows, #oo) (Conover et al., 2013; Costanza–Chock, 2012; Croeser, 2014; DeLuca, et al., 2012; Thorson, et al., 2013), and #femfuture (Loza, 2014). Tim Highfield and Tama Leaver (2015) have said that the ease of gathering Twitter metadata is an explanation as to why “Twitter is eminently examinable, it is over-represented in research – or indeed that certain practices are over-emphasized to the detriment of others” (para. 13). As such, research on hashtags in other social media platforms as well studies that do not focus on hashtags and activism are lacking in the literature.

1.2.3 Marking Events to Enacting Identity and Structuring Communities

Humphreys et al. (2013) suggest that Twitter posts are akin to diary-keeping. They claim that Twitter users employ this platform as a way to chronicle their daily life, thoughts, and

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patterns, which in turn reinforces social connections. Posts are often accompanied with the use of a hashtag to reinforce the user performance that is in display or to solidify disseminated opinions. Such identity relations through enacted self-disclosure on the microblogging site of Twitter have been studied on mental health (Jamison-Powell et al., 2013), sleep (Zappavigna, 2014b), menstruation (Thornton, 2013), self-deprecation (i.e. #badmommy) (Zappavigna, 2013), self-racialized identity (Sharma, 2015), and personal health and fitness (Teodoro and Naaman, 2013). Although some of the data corpora of these studies do not explicitly link hashtags to identity performance, it is still indicative that social media (Twitter in this case) is a way to perform identity as well as mediate the user's online persona. However, by using hashtags, users can make their identity searchable and therefore visible to a wider public (Zappavigna, 2015). Zappavigna (2014) has recently focused on identity formation on social media websites, with a focus on Twitter. Similar conclusions have been made, relating these same mechanisms of identity formation to other social media platforms (Boyd, 2014); although, the research is scarce and the studies that focus on Instagram are limited. Zappavigna (2013) highlights "how microbloggers construe an experience of semiotic belonging as they enact ambient identity" as they "engage in self-classification practices associated with social tagging" (p. 210-211). In the context of social media, 'ambient affiliation' and 'ambient identity' are the ways in which users reveal themselves on social media. For example, "Interpersonally-charged tweets invite with their hashtags an ambient audience to align with their bonds" (Zappavigna, 2011, p. 801). Therefore, hashtags represent a folksonomy while at the same time being a techno-linguistic semiotic marker. They differ from regular metadata in the sense that hashtags are considered to be a social semiotic resource that supports processes of ambient affiliation, ambient identity (Page,

2012; Zappavigna, 2011; 2013; 2015), and the formation of communities (Yang et al., 2012; Lin et al. 2013) or ‘publics’ (Bruns and Burgess, 2011).

However, there are differences to note on the different tagging norms on Instagram compared to Twitter. Pew Research did a comparative analysis on the use of #Ferguson on Twitter versus Instagram (2015). The researchers found that #Ferguson was used on Twitter most often to convey information on a specific event, whereas Instagram’s use of the same hashtag (during the same period) was about themes and ideas (Hitlin and Holcomb, 2015). Thus, attention must consider the specific norms of use of DHs in identity formation that apply to Instagram, as the hashtag practices differ from those of Twitter. The norms in use of hashtags to propagate and/or mark identity may operate differently on Instagram. The most noticeable difference between these two social media platforms in the use of hashtags is that Instagram is a visually based medium, where the hashtag identifies the picture/video, whereas on Twitter the hashtag marks the predominantly textual content of the tweet. Although the Twitter platform does support the embedding of pictures in the Tweets, pictures/videos are not necessary to make a post; while pictures/videos are the content on Instagram.

Researchers of hashtags commonly use content analysis and quantitative hashtag mapping as a method to understand identity performance as it relates to self-mediation on social media. On the other hand, research on race and hashtags called ‘blacktags,’ specifically the work of Sharma (2013) on Black Twitter, has applied sociological theory to link community aggregates around the use of a specific hashtag to mark self-actualized identity and belonging to a group on Twitter. In this sense, he takes ‘blacktags’ from a materialist approach. As he wrote “Pursuing a materialist approach also leads to re-conceiving race as an ‘assemblage’

encountering race as an emergent force in digital media vis-a-vis its networked connections, informatic flows and affects” (Sharma, 2013, p. 48).

From a techno-linguistic (hashtag) assemblage point of view, the identity, norms, and logics of an online community are not apriori established; rather, they are made emergent from the assemblage of heterogeneous elements that are constantly in the process of being made or un-made. This includes made associations with the the hashtag (the hashtag as materially semiotic), who is using the hashtag (affecting visibility), the social media platforms algorithms (what is made visible in hashtag search), the software interface (i.e. are hashtags used to tag textual or visual content), etc. (Sharma, 2013). Thus, taken from Deleuze and Guattari’s assemblage perspective (1987), the hashtag’s significance, its meaning as it relates to marking identity, and its performative role on social media are made emergent by heterogeneous associations. This way of thinking about the role of hashtags contributes to the understanding of user-relations and sub-structure (algorithms, software) relations in the making of a hashtag collective while at the same time describing the ways in which the hashtag is associated with specific material semiotic properties that represent an emergent, and actualized, reality (see section 4.1.1).

1.2.4 Dietary Modalities/Beliefs in Academic Literature

Academic writing in the field of food and culture has applied a linguistic approach to explore the emergence of dietary habits and the formation of a dietary mythos. Like the codes and grammar in language, food and dietary practices are a way an individual can assert their beliefs as well as align themselves with a collective/culture – how one speaks and how one eats assert identity as well as an attachment. The anthropologist Claude Levi-Strauss sought to decode the ontological structure of food modalities within different cultural

practices/performance. For Levi-Strauss (1983), “cooking is the language through which society unconsciously reveals its structure” (p. 495)⁵. Of importance to this study, first, he treated food as analogous to language and examined the ways in which its meaning is grasped through an understanding of symbols and metaphors associated with food. Second, and this is consistent with an ANT way of thinking about dietary modalities, he understood food mythologies as structural figurations of a community. In *The Origin of Table Manners*, his third volume of *Mythologiques*, he observed that what one deems as ‘raw/cooked/or rotten’ is a dynamic and fluid interpretation contingent on the contextual association.

It is to be noted, however, that his writing on food and diet was focused on the structure and essence of the ‘savage’ (as he wrote) mythologies, as was not uncommon for anthropologists of his time. Moreover, his much cited ‘culinary triangle’ (raw/cooked/rotten) focuses on cooking techniques rather than the type of consumed food. In his book *The Raw and the Cooked* (1983), he also maintains that specific culinary performances are not innate, but rather they are an acquired phenomenon that emerges from communal food mythologies. Each dietary belief creates its distinct food/dietary ontology, which is a symbolic practice and not a ‘natural’ necessity to sustain the body. In other words, it is a mythologically based culinary (or food) belief that created the dietary patterns of the community. Other scholars interested in dietary modalities, such as Margaret Visser (1999), noted that the opposite could also be true. The contextual fluidity in the ways one chooses to eat, such as the emergence of transnational permeation of food brands and the economic potential of industrially produced food, can change cultural food practices, and, for example, alter what one perceives as ‘raw/cooked/rotten.’

⁵ Although Claude Levi-Strauss’s *Mythologiques* volumes are still widely cited by scholars writing about food and dietary practices, they have also received major criticism. See Mary Douglas’ (1972) *Deciphering the Meal* (p. 62-63) for a fair critique. This work takes inspiration from Levi-Strauss’s *The Raw and the Cooked* (1983, originally published in 1967), while revealing some shortcomings of his food categories.

1.2.5 Food, Diet, and Myth: The Good, the Bad, and the Paradise Past

Roland Barthes employs a similar linguistic analogy in his studies on food and diet. He searched for a code or grammar and related concepts of capitalism and imperialism in his analysis on food (as cited in Nestle, 2007). When writing about dietary myth and myth in general, he described the temporary myth as “a type of speech [...] a system of communication [...] a message [...] a mode of signification, a form” (Barthes 2000, p. 109). The myth “points out and it notifies, it makes us understand and it imposes on us” (Barthes, 2000, p.117). As Barthes suggests, the semiology is the dietary mythos that informs dietary belief, and in most cases, as he suggests, can tend to be developed per the capitalism dictum. Marion Halligan’s non-fiction writing on food and myth emphasizes Barthes’ deconstruction principle with regards to food and myth (as having a connotative and second-order symbolical meaning), but in a less precarious and capitalist power-laden procedure in the actual making of dietary/food mythologies (Halligan, 1991; 1996a, 1996b, 2004).

Her autobiographical account of personal experience with food deconstructs the quotidian practices in making food to demystify dietary practices, which symbolize much more than just sustenance. As stated by Halligan (2004), “since food is something that we all know a good deal about, and indeed have an intimate relationship with several times a day, it’s a language we all speak, so it’s a good way of expressing human relations” (p. 94). Theorizing on Marion Halligan’s work, Ulla Rahbek (2011) suggests that Halligan’s ‘gastronomic memory’ is another facet of myth and food that Barthes has not considered: reminiscing about the past diet and food cultures can become a caveat “where paradise can be regained” (Rahbeck, 2011, p. 206). Dietary mythologies, and in consequence the belief that a specific dietary protocol is ‘good’ and/or

‘better,’ is also associated with the anti-capitalist idea of reliving the pre-agricultural revolution: relieving the paradise past through food (Levinovitz, 2015).

The revival of the idea of paradise past and disdain against ‘Big Food’ is not new. David Stuckler and Marion Nestle (2012) describe ‘Big Food’ as “multinational food and beverage companies with huge and concentrated market power” (p. 1). Although this way of thinking about food and the presence of a paradise past mythical narrative grounds itself against the capitalist doctrine of ‘Big Food’ and agribusiness, it is important to note that these movements do have ties to the capitalist marketplace. Whole Foods alone is a multi-billion-dollar company. Even more precarious than this, labels asserting that they are ‘natural’ are often misleading because there is no standard definition of what ‘natural’ is, and manufacturers often mislead customers for economic gain (and in most cases, large industrial companies capitalize on misconceptions)⁶. In a recent Consumer Reports publication, Urvashi Ragen, Ph.D., and Director the Consumer Reports Food Safety & Sustainability Center said that “We've seen time and again that majority of consumers believe the 'natural' label means more than it does” (as cited in Calvo, 2016).

1.2.6 Food Performance as a Narrative of Identity and Subjective Performance

Research notes that the idea of dietary collectives reliving the paradise past is a contributing factor to the phenomenon of the whole foods and organic movement, the gluten free diet, and the paleo diet (Dobrow, 2014; Levinovitz, 2015). Alan Levinovitz, a Ph.D. in religious studies, investigates the food myths that inform individuals dietary protocols. He found that “the

⁶ *Consumer Report* conducted a survey of over 1000 people across the United States to get a sense of what consumers thought ‘natural’ labels meant on products. See [URL]: http://www.consumerreports.org/content/dam/cro/news_articles/health/PDFs/ConsumerReports-Food-Labels-Survey-April-2016.pdf for full report.

myth of paradise past is one of many irrational beliefs that recur across cultures and generations, influencing our attitude toward food” (Levinovitz, 2015, p. 27). For example, we have collectively established a food hierarchy, not always based on empirical nutritional science, but on myths and dualities between ‘real’ (unprocessed, organic, grass-fed) and ‘bad’ (genetically modified organisms or GMOs, pesticides, ‘junk food’). To quote Levinovitz (2015) at length:

In reality, scientifically established facts are only one of many factors influencing our dietary decisions. Modern American food discourse—including legal and scientific discourse—bristles with moral and religious vocabulary. Foods are “natural” or “unnatural,” “good” or “bad.” Bad foods may harm you, but they are “sinfully” delicious, “guilty” pleasures. Good foods, on the other hand, are “whole,” “real,” and “clean”—terms better suited to monastic manuals and philosophical treatises (what is real food, exactly?) than to scientific discussions (p. 29)

Levinovitz (2015) also notes that beyond just the discourse, this approach to food encourages belief and adherence to dietary mythologies – and “once adopted, such practices become an important part of one’s identity and therefore hard to question or give up” (p. 27). This conclusion is in line with writings from the food/diet research of Marion Nestle. “Food is one of the most visible and important symbols of identity and difference, uniting members of the community and segregating them from other communities” (Nestle, 2007, p. 3). Food and diet are therefore a symbol that identifies and Others communities. According to Mary Douglas (1972), who specializes in social anthropology, food is a form of social communication that speaks to a group’s identity and marks them as distinct from other dietary cultures through “different degrees of hierarchy, inclusion and exclusion, boundaries and transactions across boundaries” (p. 61). Dietary practices become a collective myth: a myth that has rituals, a belief system, and symbols. As Levinovitz’s (2015) book points out, dietary practices have as much or

more to do with belief-based discourse as they do with empirical nutritional science. Food is language: it marks identity and belonging.

Bourdieu's work on class and status is also important here. In his book *Distinctions* (1984), he wrote that the upper classes use food, just as they use taste in music, art, and clothes, to differentiate themselves from the other (the 'lower' class). In this case, food mythologies are used to mark an identity that distinguishes oneself from the other. Identity here cannot be entirely separated from the collective, as it is the assertion of the collective's food beliefs that marks a person's identity as part of the 'upper class,' signaled by the accepted food practices. As such, "subjectivity includes an interest in conscious and the unconscious thoughts and emotions and the interaction of these with the constitution of the subject through language and discourse" (Caplan, 1997, p. 15). Following Foucault's ideas on 'practices' and 'technologies,' Deborah Lupton (1996) emphasizes the body as a technology of the self, whereas the food we consume represents the 'becoming' of the body one seeks to materialize. Thus, as Lupton (1996) noted, the depiction of our bodies "represent the site at which discourses and physical phenomena may be adopted as part of the individual's project to construct and express subjectivity" (p. 15). Subjective performance through food includes both consuming for health and also extends to the semiotic associations with the 'upper classes' preference in dietary practices. Following these ideas on embodiment, performances (practices), class-status (identity), and discourse and language – the body, and the way it is represented online through social media platforms, indicate a user's subjectivity towards a collective adherence of food that is deemed 'healthy' as indicated by the hypertextual interactive discourse of DH performance.

1.3 Research Questions

1.3.1 #INSERTDIETHERE: Research Questions on Diet-related activities on Instagram

Main Research Question (MRQ): How is Instagram a technocultural site in the communication processes of diet-related activities – and what role do DHs have in Instagram food-related processes?

Eating and food are highly visual, and more recently, insights into food images have emphasized that food mediated by digital interfaces has a consequence on people's eating habits (Spence et al., 2015). Therefore, the multimedia and photo sharing social media platform of Instagram is particularly relevant when studying dietary communities, dietary identities, and the ways in which DHs contribute to dietary learning. Following an ANT methodology, I trace and explore the associations, which means exploring associated hashtags, the algorithms on Instagram, the platform of Instagram, users of Instagram, etc. Following Latour (2005), ANT asks researchers to start by looking at the point of origin. As noted in the introduction, Instagram is known as a platform for the performance of food documentation; therefore, following ethnomethodology (see below), it presents as a good site to inquire about the 'daily' food consumption patterns of the users who post food content on Instagram. Although Instagram does have a web-based version of the platform, it is used most often on smartphones through the Instagram application. Therefore, the picture taking, uploading, tagging, liking, and commenting is mostly a mobile experience, which makes it convenient for users to document and tag their daily dietary practices. This fact justifies my inquiry of investigating the possibility of a new cultural – a technocultural sphere (Instagram as a platform) and explore the ways in which diet-centric discourse, in the preferred techno-linguistic form of the DH, enables the assemblage of diet-related acts and performances in a virtual space. Moreover, DHs operate differently than

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traditional communal discourse, that is, the technologically mediated space along with the technological component of hashtag language introduces algorithms and user-generated folksonomic ordering into the assemblage. Therefore, all the questions noted below take into consideration all associated elements, and how these operate within the specific line of inquiry. Once all the questions are looked at separately, the conclusion of this research will examine the relation of these statements, and how they answer the MRQ.

Research Question 1(RQ1): How do DHs inform the ways of learning of dietary practices?

Research Question 2 (RQ2): How are DHs myth-making (or myth-enabling)?

Research Question 3 (RQ3): How are DHs used to project user subjectivity online?

Research Question 4 (RQ4): How do DHs enable the formation of dietary collectives through intersubjective discourse?

1.4 Theoretical Considerations

As stated in the introduction, this work follows an ANT approach to investigate made associations, what this means for the user, as well as consider the produced phenomenon of these entanglements. In brief, ANT is used in this study to show that the connections between the human (user) and the non-human (hashtag) create the emergence of a new way to practice diet related pursuits. The following research suggests that these include the ways in which human-DH interactions contribute to dietary learning and dietary mythologies (marking a reality descriptive of the material semiotic hashtag marker). As a second function of DHs, which is part of the human-technology assemblage, DHs are hypothesized to be techno-linguistically significant, meaning that they are a way to perform subjectivity, and create intersubjective bonds between users who share the same beliefs in ways on eating (enabling DH communities). I

subdivide my research question into four dietary related acts, which puts into focus the possible roles of DHs. I examine the specific phenomena separately; however, these sub-hypotheses relate to one another. That is, they all express the way in which traditional individual/communal diet and food related acts are now being performed online through DHs. The RQs above represent how acts of eating have transgressed into the technological realm; they investigate how technology and diet intersect on Instagram. It is a way to explore the significance of the DH in culinary learning, as well as investigate the ways in which DHs are performed and for which purposes.

As such, to be able to appropriately apply ANT to a study of the outlined research questions, I first take ideas from Greimas's semiotics and Garfinkel's ethnomethodology (see below) to explore the application of ANT to the study of food practices and DHs. Garfinkel's ideas, along with semiotics (from Greimas), were theoretical precursors to ANT (Latour, 2005). As stated by Latour (2005), "it would be fairly accurate to describe ANT as being half Garfinkel and half Greimas" (p.54n). From these insights, I map analytical frameworks and analyze the data gathered from the method outlined in the methodology section (see Chapter 2). Furthermore, my analysis is strengthened by John Law's work (2009) on material semiology. Law employs an ANT way of thinking through the assemblage of elements, and how these contribute to the emergence of discursively-made realities:

Like other material-semiotic approaches, the actor-network approach thus describes the enactment of materially and discursively heterogeneous relations that produce and reshuffle all kinds of actors including objects, subjects, human beings, machines, animals, 'nature,' ideas, organizations, inequalities, scale and sizes, and geographical arrangements (p. 141)

It, therefore, becomes appropriate to incorporate Law's work on material semiotics in the exploration of folksonomically-made DH semiotic discourse.

1.4.1 Greimas's Semiotics and Garfinkel's Ethnomethodology

From Greimas's contributions to the study of semiotics, Latour (2005), and consequently ANT, borrow Greimas's ideas on narratives. Latour adapts Greimas's work on elements in narration to examine the symbolic formation of groups, including their position against anti-groups, as well as look at the formation of individual identity/performance from semiotic/narrative principles (Latour, 2005). Moreover, Greimas notes that narratives and discourses are the elements from which these phenomena are made, un-made, and re-made: he emphasizes that semiotics must consider comparative mythology and narratology when examining the emergence of these phenomena (Greimas, 1982). As such, in reference to this research, the semiotic properties of DHs are examined based on an analysis of the presented narrative structure from the respective DH (see section 3.1). It is a way to deconstruct the elements in the DHs narrative structure, as well as explore the ways in which DHs imply symbolic meaning. Latour (2005) noted the 'messiness' of this way of documenting associative elements in narration, and he writes that these 'uncertainties' (meaning the ways in which heterogeneous elements associate to make visible structures in narration and semiotic representation) "... have to be piled on top of one another, with each new one making the former even more puzzling until some common sense is regained – but only at the end" (p. 22). To make sense of these semiotic/narrative structures in the analysis of DHs, as well as answer the questions under inquiry, there is a need to consider the structural properties in hashtag meaning-making. DHs are investigated based on their contribution to the formation of groups (ambient affiliation), individuals, belief systems, and ways of knowing.

Garfinkel's ethnomethodology, on the other hand, is far less structural than Greimas's work. Although both seek to understand the ways in which people make sense of things, as well

as look at the elements that allow for meaning making, Garfinkel strongly focuses on the human practices people engage in to understand the world and make meaning. Ethnomethodology investigates the ways in which individuals create order and understanding through shared sense making practices (Garfinkel, 1967). In the case of DHs, this perspective can help look at how users participate in hashtag discourse and how such discursive mechanisms are used to make sense of 'the right way to eat.' It, therefore, becomes a ritualistic practice in which DHs are only seen to mean something because of the shared communal meaning that is given to a particular DH: these shared meanings are made by associative user practices/performances.

To illustrate the use of these two theorists in an ANT methodological approach, Latour (2003) wrote that "one could say that it is a hybridization of Garfinkel for humans and Greimas for non-humans" (p. 40). While the semiotic side looks at the making of a narrative, and how language and discourse are made to connote something, Garfinkel looks at the human practices which allow for those non-human entities to mean something. Both concepts work together; it is a way to understand the associations between the human and the non-human, and what this ultimately means in the context of the social. It is a sticky hermeneutic relationship; however, it provides an approach to understand how users give meaning to DHs, and how DHs give meaning to users.

1.4.2 Material Semiology and the DH: Dietary Performance as Emergent

According to John Law, a major theorist in the domain of ANT, material realities are plural rather than associations generating a singular reality. Inspired by Annemarie Mol's *The Body Multiple* (2002), this is what Law (2002) calls the material semiotic mode whereby each practice generates its own material reality. In other words, realities are enacted and emerge as

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actants/actors form associations within the network and turn the material semiotic (the hashtag) into a performance vehicle which indicates a specific enactment of a reality. Similar to Garfinkel's (1967) perspective on the ways in which humans make sense of things, users' shared practices in DH discourse generate an enactment of a shared dietary reality. Although not an ANT theorist, Verhurst (2008) writes in the context of digitally mediated communication and he notes that new maps can be created by the hyperlink structures and thus can reveal new realities to the observer. These new conceptual communication maps "no longer simply frame or 'augment' reality; they actually invent new realities" (Verhulst, 2002, p. 199). Traditional media outlets do play their role in communicating 'good' dietary protocols; however social media and the communicative force of hashtags segments dietary beliefs in a way that legitimizes the DH being performed (an indicator of the dietary belief of the user). Users can be added to the links of the formed dietary network. The hyperlink structure of hashtags, therefore, allows for a tracing of associations and mapping out these generative and multiple realities (dietary beliefs). Similar to the concept of hashtags as material semiotic enactments of realities, Oana Brindusa Albu and Michael Etter (2015) took a socio-materiality approach to trace the discursive-material role of the hashtag. Their findings provide a novel way to understand the hypertextual feature of the hashtag as a process of interactions and associations, which is in a dynamic state of coproduction to bring an identity or a mode of thought into being. Following this research, as it pertains to ANT and the previously outlined research questions, I therefore contend that hashtags, as a hyperlinked structuring device, not only create a folksonomy that categorizes or orders content, hashtags are also materially semiotic devices that symbolize the emergence of a dietary reality: DHs can then be summarized as categorical, symbolically marking (identity forming), and propagating dietary mythos. Indeed, employing a DH to display one's dietary

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performance makes this dietary mythology visible on social media which makes them susceptible to be intercepted with by users on social media.

CHAPTER 2 METHODOLOGY

The methodology for this study incorporates the pre-existing methodological and theoretical conceptualization of the hashtag as well as introduces a new way to understand and analyze hashtags. As the study makes inroads into the underexplored territory of Instagram hashtags, innovative use of existing methods used here offer a thorough examination of my research questions, and also offer a novel methodological contribution to the field of social media inquiry.

Since I located Instagram as the site of the inquiry, it is , therefore, important to recognize the associations between user-technology-platform. From a technological standpoint, McBride (2003) wrote that “ANT suggests that technology is as much a product of social construction than of technical innovation” (p. 266) – this includes the adoption of technology, the technological device (the smartphone), its applications (social media – Instagram), and finally why and how they use it. Therefore, Instagram users are already part of an existing actor-network, and the adoption of Instagram in daily practice extends as a link to the actor-network. Since eating is commonly a communal, daily, linguistic, and visual practice, it is no surprise that users on Instagram document their food practices through mobile technologies and the visual platform of Instagram. This process includes the visual (the picture of the food) and the ontological (categorizing their food posts with a hashtag and/or a caption). A user’s dietary protocol is documented in the process of (hash)tagging their meals, and through this process becomes part of the actor-network of a dietary regime by making it visible and traceable through posts and hashtags. I seek to describe the ways in which DHs are multi-model in their purpose and their effects. At once they are intermediaries (vehicles of translation) and mediators (becoming actors in the actor-network). This is important from a methodological standpoint for

the following reasons: I seek to understand a DH as an identity marker that is part of a dietary collective on social media, as well as describe how the DH is made visible in such a way that it creates a new link for an individual (which they either adopt or reject depending on their existing position within the actor-network). The former emphasizes the DH as an intermediary, whereas the latter describes the role of the hashtag as a mediator (an actor with agency) which propagates a way of knowing a dietary mythology.

The results of dietary adherence are generative. Viewed through the lens of ANT, the assemblage of a communal dietary regime “... are the effects of a set of materially heterogeneous relations” (Law, 2009, p. 145). Therefore, studying hashtags as an empirical indicator allows for the theoretical to be situated in descriptive case studies – how do DHs translate and assemble to form a communal point of reference? It is in this way that hashtags are descriptive; they enable to trace the associations between actors to exemplify the propagating semiotic vehicle (the hashtag) that influences user dietary regimens (constructing a dietary mythology in which the user adheres).

2.1 Methodology: Considerations and Limitations

The data collection process, as well as the methods used to analyze the data to answer the RQs appropriately, was limited by the availability of Instagram methodology in current literature. However, the study follows an ANT way of looking at network association; it is thus important to note that there is not a specific protocol outlined by ANT, and each investigation should follow an appropriate assessment of the associations under study. Therefore, the methodological structure and the data collection process was informed by the Instagram platform itself and look at the ways the users make links within the network and with each other. The

method incorporates the pre-existing methodological and theoretical conceptualizations which enable this research to draw conclusions in this new field of study. Although no one method or system of analysis is appropriate by itself, many were used and adapted to fit the questions under review.

Although these considerations are guiding points in the data collected, my methodology is conducted as an iterative process. Since the literature on hashtag analysis is limited, especially as it pertains to research on Instagram, I experimented with modes in hashtag analysis that answer the RQs under inquiry. The initial method of data collection used established hashtag Twitter methods (see literature review). That is, I used netlytics, a third-party data abstraction software, to track DHs. Specifically, I initially collected quantitative data on the use of #glutenfree, later exploring other DHs (e.g. #paleo, #vegan, etc.) and broader hashtags which associate with DHs (e.g. #healthy, #eatclean). However, utilizing the Twitter hashtag method in gathering Instagram data has posed many limitations. Each social media platform has its own API restrictions. For example, see Table 1⁷ for a comparison of the data abstracted from Twitter versus the data abstracted from Instagram.

Instagram	Twitter
guid	user id str
link	status url
medialink	source
pubdate	time
	created at
author	from user
title	text
description	status url
like counts*	

Table 1. API abstraction of data, a comparison of Instagram versus Twitter. *= this dataset was only made available after a change in Instagram's API setting, which is dated post June 1st, 2016
**= this dataset was only made available after a change in Instagram's API setting, which is dated post August 17th, 2016

⁷It is beyond the scope of the paper to explain these terms in detail, as well as explain the differences in the specifics of API data abstraction. However, the reader should note that the differences in the data collected from the API extraction software, which makes the appropriation of established quantitative Twitter methods problematic within the context of Instagram analysis.

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filter**	
to	in reply to user id
coords	geo coordinates
	user location
	user language
	in reply to status id str
	profile image url
	user follower count
	user friend count

There is an evident discrepancy in the data that can be collected from Instagram versus Twitter. The available Instagram quantitative data, therefore, posed limitations to the research. The data was not able to answer the questions that are of interest in this study. The discrepancy in data availability is consistent with what Gillian Rose (2016) noted about Instagram analytics: "Instagram is a highly complex series of networks algorithmically shaped by 'likes' and 'followings,' location and privacy settings. The circulation of Instagram Images", including their accompanying captions and hashtags, "therefore follows patterns, which cultural analytics does not show" (p. 302). As such, a different approach was necessary to understand the complex circulation and assemblage of the elements on Instagram. Although I have not completely discounted the gathered quantitative data sets, I did alter my methodological structure to better answer the questions under review. As such, as previously mentioned, my methods are conducted from an experimental point of view. This process does not discount the validity of the method; it does, however, demonstrate the methodological contributions this research makes in this field of study. As such, my methods outline the limitations of certain approaches, and how I have overcome these.

The gaps in the quantitative Instagram data sets led me to revisit theory. I looked at other existing methods and systems of analysis, both within ANT and social media studies, and

appropriated these to fit an investigation of DHs on Instagram. As previously mentioned, Latour (2005) describes ANT as half Greimas's semiotics and half ethnomethodology. Therefore, I visited Greimas's structural work on narrative models to create a framework which will guide the research (see section 3.1). This framework in ordering hashtag observations was particularly appropriate. Although it is a structural framework, it does recognize the dynamic interplay of assembled units in folksonomic ordering. Recognizing the interplay between elements is particularly important for my study since meaning making stems from a dynamic process of user-algorithm-software entanglement. Following this theoretical framework, I have utilized the walkthrough method (Light et al., 2016) to analyze the ways in which hashtag narrations are made and re-made. Moreover, as part of the walkthrough method, I also incorporate what I term the "walkthrough vignette" method as a concrete case study which explores the elements of narration and examines DHs contribution into ways of knowing (see section 2.2.1). I also incorporate a case study on subjectivity. I use Zappavigna's (2016) Instagram subjectivity model to analyze a real user's account (see section 2.4.3). As previously mentioned, I do not rely on the quantitative datasets from netlytics; however, I do use these datasets to supplement the qualitative analysis. The data collected from these methods is then examined, with each section answering the RQ under review.

Similar to 'hashtag semiology' as employed by scholars such as Zappavigna, my analysis takes hashtags as materially-semiotic linguistic tools. This follows ANT's conceptualization of the entanglement and associations between humans and non-humans, both having agency in the 'network' and affecting the emergence of a dietary collective linked through the techno-linguistic hashtag. As a unit of analysis, I use #healthy as the main point of departure. From there, I have selectively sampled DHs, which are made most visible through #healthy search queries. It is an

inexhaustible list; therefore, I have selectively sampled three main variables: #whole30, #vegan, and #glutenfree. These three DHs will be used interchangeably throughout the paper to give a variety in the use/role of particular DHs (the justification for the specific use of the DH are explained within the respective sections). The aim for this methodological structure is to create a comprehensive framework, which emphasizes the user experience, as well to examine the role of DHs in the assemblage of the dietary social on Instagram (whether in terms subjective or intersubjective performance). Once the RQs are considered separately, the produced datasets, including the findings, are then discussed in parallel with each other to understand the ‘techno-cultural’ aspect on Instagram. This approach answers the corresponding RQs outlined above.

2.2 The Walkthrough Method

The walkthrough method (Light et al., 2016) is a systematic way for the researcher to put him or herself in the user’s perspective, and to see how he/she would navigate within this virtual space. Light et al. (2016) note that this method “... is grounded in the principles of Actor-Network Theory (ANT)” (p. 6). Here, the strategy is to explore the technocultural significance of Instagram in dietary learning, make visible the different elements within the assemblage, as well as explore how these associations contribute to the formation of a dietary narrative. As the name suggests, the method consists of gathering data from exploring the elements within the application under study. It is a way to analyze critically the user experience, and in this instance, the user's experience in navigating the dietary terrain on Instagram.

The walkthrough method is a way to overcome the challenge of investigating the closed-system application. It is a deep, immersive method which simulates the user experience of the application under review. It uses screen capture technology to document the pathways of

navigation. It is a way to code for the significance of the sociocultural impact of Instagram as well as analyze its cultural meaning and role in enabling non-geographically based network publics. Bucher and Helmond (2017), although not explicitly calling it the walkthrough method, note that examining the applications environment in this way enables to look at the affordances of the technology⁸. Affordances are embedded in Instagram itself, which leads to a certain way of constructing a user's online experience. This is precisely what the walkthrough method makes possible; a detailed exploration into the affordances of the Instagram environment. It allows for the description of the ways in which users interact with the platform, with other users, and trace user action. It is not just the visual (interface) that curates the user Instagram experience; walking through the aspects of technological affordances also looks at the association processes in modified user action. For instance, dietary performances on Instagram are widespread because of the portability of the device, and therefore, the accessibility of the application found in the device. Almost in real time, it *affords* for users to take pictures and upload their daily consumptive habits– thus creating a complex structure in food documentation and sharing. Uploading pictures of food is made easy; the almost constant presence of the device as part of the user encourages these behaviors. The walkthrough method looks at these online performances as well as consider, in this instance, what food documentation means in the Instagram environment.

⁸In technological studies, affordances look at what technology makes possible. It looks at the possibility of an action to take place in a given environment. The affordances of a social media application specifically looks at the actions the platform allows for and what this means for the user experience. See Bucher and Helmond's (2017) '*The affordances of social media platforms*'.

2.3 Preliminary Considerations

2.3.1 What Are DHs? Do They Translate Meaning or Make Meaning?

ANT categorizes elements by examining their communicative role. ANT, therefore, distinguishes between intermediaries and mediators. Simply put, intermediaries pass meaning, which remains unchanged through the passing within the network – as such these elements are vehicles that transport meaning (Latour, 2005). On the other hand, mediators are transformative, and they alter the meaning or the phenomenon within the network (Latour, 2005). Users in the context of Instagram are defined as mediators. However, it becomes slippery when we consider the role DHs as being intermediary or mediator. As a point of departure, Section 3.2 describes which role DHs play: are DHs intermediaries or mediators (or both)? It applies the walkthrough method, along with the theoretical considerations, to situate what exactly the variable (the hashtag) is. The character of the hashtag is important to establish, as it will determine if hashtags are passive or active in the association between user-Instagram (and userA-Instagram-userB), as well as consider if hashtags enable for user-materiality to emerge through individual/shared hashtag discourse.

2.3.2 Preliminary Walkthrough Method: Setting up the Stage of Elements in the Application and the Assemblage⁹

A user must sign up to the application to make use of its functions. Once a user signs up, there are five main tabs in the application. The first is the home page. The home page is where followed user updates are displayed. At first, this information was posted in chronological order; however, there are frequent changes in social media applications over time, which also means

⁹Note: This is a snapshot of how Instagram looked like on October 21st, 2016. The elements of the application may change in a different time period.

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that the algorithmic display of content can also change over time. Once Facebook bought Instagram in 2012, the algorithms eventually changed under the new ownership. In June 2016, the way updated posts were displayed resembled Facebook's news feed, that is, posts were no longer in chronological order, but were determined based on a proprietary algorithm. In brief, this means that the posts are ordered based on the posts timestamp, the historical interaction the account has with the user who posted the content, and how interesting the Instagram algorithms thinks you will find the post. In August 2016, Instagram also created a new section on the home page, which is called 'stories.' These are short clips of pictures/videos of a specific user, which appear at the top of the user's home page (Figure 1).

Figure 1.
Instagram home page.
The top portion shows
the 'stories' function,
and the bottom portion
is the 'news feed'

Figure 2.
Instagram 'Explore page'

Figure 3.
Instagram search
function. This is part of
the 'Explore page' tab

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The next tab is called the 'Explore page' (Figure 2). The Explore page is where a user can search users (which they call people), tags (hashtags), and places (geographical location of content posted) (Figure 3). The 'Top' Tab shows recent accounts a user visited, as well as recent/most searched hash(tags). The organization of search queries shows the limited ways in which users can search. You either search people, places, or hashtags. Therefore, if a user is looking for content on a specific topic, they are likely to engage in a hashtag search query. The Explore page also includes algorithmically selected user 'stories,' videos, and pictured content. These are determined based on account a user follows (Figure 4), posts a user liked (Figure 5), and 'Instagram suggested' (Figure 6). It should be noted, however, that the 'Instagram suggested' posts become less and less visible once the account is established and active (that is, the user account has a repertoire of 'likes' and followed users). The Explore page is, therefore, one of the points of focus in this walkthrough method. For example, @valerievignette's Explore page (the account I created for the walkthrough method), based on the #healthy search query, will be analyzed according to the content and the hashtags (especially the DHs) made visible.

The third tab is the camera tab. It is separated into three sections: gallery, photo, and video. The gallery section is where a user can select their pre-existing photos/videos and post them. Once a picture is selected; the user is also able to use a filter on the Image. Filters allow for an image undergoes a pre-set Instagram photo-editing. The filters include 24 filter types, one of which is the original image (called 'Normal' on Instagram). The user may also use the edit function in this tab, which means that the user can edit the picture in more detail (for example the user can adjust the brightness and contrast of the picture). The 'photo' and 'video' section is where a user can capture a real-time image/video by using their smartphone's camera. Once the user captures an image, they are also able to use the filter/edit function before uploading the

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Figure 4. Example of a post on the Explore page, suggested 'based on people you follow'

Figure 5. Example of a post on the Explore page, suggested 'based on photos you liked'

Figure 6. Example of a post on the Explore page, 'Instagram suggested'

Figure 7. The account tab. Where a user can view their posted content and edit their profile

picture/video on their account. The fourth tab is the ‘heart’ tab. This fourth tab is where the user can look up the activity of followed users, as well as the activity of their account (this means who liked, commented, or started to follow their account). The fifth tab is the account tab. Here, a user can edit their profile, view their profile, as well as access Instagram options (Figure 7), which include account settings and support (Figure 8).

Figure 8. The options function found in the account tab. This is a list of all the options available to the user.

This primary walkthrough looks at the functionalities and options of the application. However, within the content of this research, certain application affordances are in focus. This includes the hashtag search query (part of the Explore page tab), as well as the algorithmic content made visible on the Explore page. The walkthrough vignette strategy, for example, looks at the results of the hashtag search query of #healthy. Moreover, @valerievignette’s user activities (detailed in Chapter 3), such as liking and following the content made visible through such queries, affects what is made visible to her on the Explore page. The Explore page will

show content that was deemed algorithmically relevant according to @valerievignette's activity. It is meant to emphasize the assemblage process of DH visibility, including an investigation of the content curated to the user.

2.4 Methods Used to Investigate the RQs

As previously indicated, the research questions explore the way in which DHs, along with the social media platform of Instagram and the algorithms in the software, is one of the ways in which dietary modalities (through the multi-faceted role of the DH) are made to mark identity and belongingness to a community, propagate, and legitimize. Although these elements are likely associated with each other, I begin by analyzing each individually through method to understand how their associations relate to one another in each role of the DH.

2.4.1 RQ1: The Walkthrough Vignette to Investigate Ways of Learning

Within the walkthrough method, I apply what I term the walkthrough vignette strategy. I use this strategy to describe the event of a user searching #healthy. I created a new Instagram account and navigated the Instagram space in order to create a walkthrough vignette (using the pseudonym of '@valerievignette' as my user identification). The walkthrough vignette looks at the sequences of @valerievignette's interactions within this event, its association with the space (Instagram), and all the elements which lead to the transpiring of such an event. This includes examining the visibility of specific DHs, as well as examining how performances enabled this visibility and what this consequently means for the user. I use this strategy to investigate RQ1. The first consideration is to explore the causal relationship (if any) between DH search queries on Instagram and the visibility of dietary narratives. I will use an adapted version of Greimas's

narrative structure in order to investigate this relationship. Following this, I will be able to see how modes in dietary narration contribute to the way in which a user learns about a 'healthy' dietary modality. The presented vignette follows the definition as given by Atzmüller and Steiner (2010), who note that the vignette is a way of “representing a systematic combination of characteristics” (p. 128). Thus, by descriptive measures, I show the ways in which Greimas’s narrative elements assemble (Ricoeur, 1989), and what this means for the user navigating the Instagram space. This vignette sketch was conducted on October 21st, 2016. Therefore, it provides a representation of the Instagram narrative at this time. It should be noted, however, that this style of vignette production can be endlessly replicated in order to see what the assembled units in Greimas’s narrative model make visible in hashtag search queries.

2.4.2 RQ2: Walkthrough Vignette and Extracting Qualisigns: Semiotics of the Myth

I will explore the black-box effect following an ANT way of thinking. I consider the mechanisms in which myth emerges as truth, and how myth gets semiologically associated with a quasi-object (or token-symbol). Following this direction, I will be able to investigate what the hashtag makes visible, along with investigating the heterogeneous elements which enable for meaning to be tied to a DH (this includes Instagram’s algorithms and software). Similar to the method employed in RQ1, I use the walkthrough vignette method to explore the myth and semiotic structure of the DH #glutenfree. These elements all contribute to the emergence of a dietary semiotic ordering bonded by the associations of the DH – which narrate the ways in which dietary modalities are perceived by user search queries.

To investigate the material-semiotic properties of hashtags, that is, how #glutenfree persuades a way of eating and embodies a user's materiality through dietary adherence, I refer to

Zappavigna's (2015) research on hashtag semiotics, supplemented with Peirce's (1868) semiotic category of 'qualisigns.' Since representing 'wellness' and 'eating healthy' on social media must be embodied into a sign, the DH is the techno-linguistic mode (token-symbol) in which 'wellness' and 'eating healthy' can be embodied. Abstracting these 'qualisigns' from the hashtag through quantitative data collection of Instagram posts as well as content analysis on how #glutenfree is represented in search queries will demonstrate the way in which #glutenfree is represented in social media discourse. The data collection for my content analysis was conducted over the period of seven days – from December 30th, 2016 to January 6th, 2017. From the produced data, I will extract the qualisigns which give #glutenfree semiotic significance, as well as analyze what this means in the persuasion of a way of eating. Both methods focus on what connections bring the user and the diet together, for example, in which ways does a dietary myth perpetuate and propagate to inform consumption patterns and individual dietary modalities.

2.4.3 RQ3: DH and Food Content to Investigate Virtually-Made Materiality and Subjectivity

I model this method from Zappavigna's (2016) Instagram subjective method. He looks at the ways that the user's post, 'as photographer,' constructs a virtual persona through the posted content. He also emphasizes how these images are associative mechanisms with which to form relationships with other users. As he wrote, "the discourse of the self is 'activated' via the Instagram's profile" and "the essential principle of a user's Instagram stream is an ongoing display of self to ambient audiences" (p. 277). Therefore, this method of looking at user composed subjectivity is a way to analyze the importance of food-related posts and associated DH discourse in the construction of the self in the virtual. I seek to look at the role of DHs (which includes the posts they are associated to) and how they make the user's materiality

emerge; that is, I analyze the way that subjectivity is performed via the mechanism of content posting and hashtagging. I ask how these contribute to the making of the subjective ‘I’ on Instagram, and how these associates a user to a material semiotic reality (explained further in section 4.1.2).

The data is collected from the case study of an Instagram user @whole30yogi¹⁰. This account was selected because this user projects herself online predominantly through pictures of food. There are very few pictures of the user herself. However, she uses food to make her materiality appear online and connect with other users on Instagram. This will be explored in more detail in chapter 3. At the time of writing, @whole30yogi had 263 posts. I look at the pictures that were posted in the last three months (July 20, 2016, to October 17, 2016); Zappavigna (2016) notes that the point of saturation is 3 months of consecutive posts. Thus, the dataset, which is categorized via the subjectivity network, includes 79 posts. Figure 9 shows the way posts are categorized. ‘As photographer’ suggests the essence of the photographer **as part** of the picture. *Represent* means that the body/face is present (usually a selfie); *infer* incorporates a body part in the picture to show that they are present in the action; *imply* photographs do not have any part of the user in the picture, however, it is still part of the ‘as photographer’ since it implies that the user is part of the photographed experience, even if they are absent. ‘With photographer’ has the photographer, the user, more removed from the picture. Rather than being part of the photograph, “there are no clues in the visual structure relating to the subjective presence of the photographer in the *with photographer* choice” (Zappavigna, 2016, p. 279). Although the photographer is recognized as present when the photograph was taken by virtue of knowing it was posted on the user’s profile, taken out of context, there is no way of knowing

¹⁰ This account was found when I was using the walkthrough method. One of @whole30yogi’s pictures appeared in @valerievignette’s Explore page.

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there is a human subject present in the photographed act/event. This distinction is made in order to review the way a user positions themselves via their posts regarding food. For instance, the ‘as photographer,’ especially the ‘infer’ and ‘imply’ categories, invites users into the frame of reference – it is a way to invoke a shared dietary experience, which has traditionally occurred at the dinner table. Moreover, in order to incorporate these findings within the framework of DHs, I have also looked at the number of instances specific DHs were used in these posts. This will answer if DHs are a way to represent user subjectivity online. This particular method is an analytical tool used to make sense of user profiles that I have stumbled upon when conducting the walkthrough method. It is a mechanism to sort the profile data sets that have been retrieved as part of the walkthrough method.

Figure 9. Subjectification Model (adapted from Zappavigna, 2016)

2.4.4 RQ4: Intersubjective Discourse and Dietary Collectives

I continue the walkthrough method to examine the intersubjectivity that may arise from ambient association with users (such as affiliations with @whole30yogi). That is, I seek to explore how user's subjectivities are experienced through and within each other to then create communities that revolve around a shared DH discourse. This will be a way to examine how individual subjectivities form bonds within the network to make concrete a dietary 'reality' (i.e. material semiotic realities (Law, 2009). Since the theoretical considerations pertain to an ANT methodological approach, I employ Garfinkel's ethnomethodology to trace associations between users. Garfinkel's anthropological observations trace ethnomethodological considerations, and this method uses this principle to investigate how users use hashtag discourse, and other means of virtual affiliation, to construct a shared view of the world: a shared view that is based on ways of eating. I use @valerievignette user walkthrough to trace intersubjective affiliations. Moreover, I continue the walkthrough method – specifically @valerievignette 'likes' and 'follows' accounts that have been made visible to her in the top 9 results in #healthy search queries. From this, @valerievignette's Explore page reflects the DH community in which the account is a part of due to intersubjective affiliation.

As previously noted, all stated research questions are linked with one another. Therefore, as a point of departure, I consider @whole30yogi's engagement with other Instagram users based on dietary discourse found in the comment section of her posted content. To add to these findings, I look at the number of likes she receives over time. If the number of likes has increased over time (from the first post to the last), this is an indicator that her DH discourse has attracted other users who identify (subjectively) with the #whole30 narrative. Although not entirely conclusive, it is a way to trace how intersubjectivity is performed (made) on Instagram:

DHs are a linguistic mode which, when performed vis-à-vis other users, demonstrate the presence of a shared belief in the consumption of food.

2.5 Final Remarks on Methods

The decisions made on which posts @valerievignette liked and which users she followed were first based on the visibility of posts from #healthy, and other DHs, search queries.

@valerievignette followed accounts that appeared in the top 9 results and liked pictures from these users. Following this, Instagram's algorithms tailored @valerievignette's Explore page to reflect @valerievignette's activity. I then followed the user and liked pictures that were dietary-related and made visible on the Explore page. The establishment of a group of followed accounts also created a newsfeed for @valerievignette. I would then like the pictures on the newsfeed.

Looking at the profile of account followed suggested other similar users to follow: this was another way in which users were followed. There were no structured decision-making practices since I was simulating a user experience in the diet-related Instagram sphere. I followed users and liked pictures when the user's posted content was aesthetically appealing, and I followed users that were made visible to @valerievignette; similar to the activity of an Instagram user.

Following is a list of the ways in which user accounts were selected to follow and which posts were 'liked'¹¹:

- Posts/accounts from users found in the top 9 results of a DH search queries
- Posts/accounts from users found on the Explore page

¹¹Appendix 1 shows @valerievignette's final profile stats. The followed account and liked content where accumulated over time to simulate an Instagram user's activity. The dates range from October 19th2016 to March 1st 2017.

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- Accounts that Instagram suggests following based on the relation of that user to another user (similar accounts)
- Posts/Accounts found by clicking a DH found in a followed user's post (redirects to the search function and displays the top 9 results for that hashtag)
- Posts on the Instagram's homepage/feed (these only show the posts of followed users)

Additionally, because of this largely experimental methodological approach, the timestamps on the data are scattered rather than being ordered chronologically over time. Even though there is no consistency or pattern in the dates, the methods maintain best practices; that is, they are reproducible and reliable. Future research in this field of Instagram hashtag studies will be able to use these approaches, especially when quantitative data abstraction is insufficient to make sound conclusions.

CHAPTER 3

THE NARRATIVE FUNCTION OF DHS: DIETARY LEARNING AND DIETARY MYTHS

I thought Whole30 was my answer. All of the foods I saw on Instagram tagged with #Whole30 looked so good and good for me and I wanted to jump on the bandwagon everyone else was getting on! So I pulled out my calendar and wrote down when I would start and when the 30 days would end (Ferguson, 2016)

As the idea of food perfectionist takes hold of a person's mind, they must navigate through online and offline resources to decide which foods, or which diet, they seek to consume and/or associate with, to attain or maintain a personal bodily ideal. Although it is true that some users of Instagram are not entirely preoccupied with the properties of their food and/or diet, even a superficial glance of the platform reveals that there is a subset of users who are concerned with the details of their food consumption. Ferguson quotation, taken from her personal blog fitlivingeat.com, illustrates the ways in which the #Whole30 diet has attractive associative characteristics, which invites users to adopt the #Whole30 narrative. It represents an online marking of a dietary myth, as well as a search query of #Whole30 initiates a visual experience in which a user can see and learn about this way of eating from other users who incorporate #Whole30 as part of their online discourse.

Although stipulation of what DHs really do can only go so far from looking at a single quotation taken from a user's blog post, it is nonetheless telling that the user-generated folksonomy (i.e. categorizing posts using hashtags) orders the way users navigate social media websites, including Instagram, which informs the emergence of learning and dietary self-prescription. As this chapter explores these ideas in relevance to the use and role of DHs on Instagram, I begin my situating the lens in which DHs are analyzed: that is, answering what role do DHs have in transmitting information and establishing a dietary myth. Furthermore, the sample case studies based on a selective sampling of the walkthrough method will examine

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prominent DHs found in #healthy search queries (such as #whole30, #vegan, and #glutenfree).

These case studies explore what exactly these DHs make visible; it is a way to understand the ways in which user's interpret DHs – and perhaps see how users grapple with DHs to eventually incorporate them into their personal consumption patterns.

Hashtags, and thus DHs, are only made meaningful by user performance and participation with the hashtag. It is an ongoing process of meaning-making, which enable for a connection to be made between the hashtag and its signification. The assemblage of perpetual DH meaning-making, in turn, represent a way of being and a way of thinking. It is a linguistic device that marks these representations, as well as makes these visible to the public who use Instagram to inquire about (healthy) dietary modalities. Indeed, hashtags are often referred to by scholars as 'techno-linguistic' devices (Page, 2012; Sharma, 2013; Zappavigna, 2015).

Zappavigna (2015) explains the linguistic function of hashtags on social media:

Hashtags operate in posts both as part of the linguistic structure and discourse semantics and also as metadata. Metadata is information appended to some primary form of content to assist in retrieving and understanding that content when it is stored or published (e.g. information about when and where a social media post was produced). Like traditional metadata, hashtags afford abstraction, enabling information at higher or more complex orders of experience to be appended to the main content of a post. (p. 276)

For a user searching for content, hashtags are then the primary tool in which to attain information. However, what is made visible to the user is a matter of aggregate metadata, which in association with other elements in the assemblage (Instagram's algorithms and software for example), is skewed depending on dominant folksonimic signification. Therefore, what the user sees is not all the metadata (content tagged with a certain hashtag), but an abridged version of the information under query; this is especially true when we consider what is made visible in the top nine posts of Instagram hashtag searches. In this way, hashtags, along with the algorithms, users,

and assemblage of associative materials, create an online architecture, thus making visible certain hashtag narratives. In this chapter I ask whether these mechanisms of dynamic assembled ordering, in turn, inform the way users navigate Instagram and engage in processes of learning.

This chapter considers the significance of dietary meaning-making on Instagram, as well as puts a strong focus on the role of DHs in this assemblage process. I put forward a theoretical examination of how DHs perform the role of a techno-linguistic narrative assemblage, make possible the emergence of semiotically-enabled dietary myths, as well aggregate *searchable talk*. I pull apart the theoretical underpinnings of ANT and examine these in the context of diet modalities on Instagram. For instance, ANT uses many concepts from structuralism (semiotics), post-structuralism, and ethnomethodology. It is, therefore, the researcher's task to examine these facets and make sense of them by describing the links in the network, the elements of association, as well as how these assemble to inform a material semiotic narrative of performed reality. This chapter begins by describing the structuralist analytical structure that will be used for both RQ1 and RQ2. It is a means to demonstrate how the narrative structures on Instagram operate in such a way to give a DH meaning (both allowing for culinary learning and myth-making). Following Zappavigna's (2015) conclusion that the "...key semiotic resource supporting [searchable narratives] is the hashtag" (p. 274), I call this hashtag semiotics. I take into consideration the operational role of the DH itself; whether DHs are mediators with agency or if they are intermediary vehicles of translation. This will be explained in detail in section 3.2.

In brief, this chapter breaks down RQ1 and RQ2 and asks and explores the following:

Analytical map of DHs and how these are examined: Section 3.1

RQ1: Section 3.2 and 3.3

1. What is the narrative and discursive role of the DH (e.g. are they intermediaries, mediators, or both)?
2. Which are the significant semiotic components in the formation of a narrative?
3. In which way is the Instagram platform a new cultural (a techno-cultural) site of dietary learning?

RQ2: Section 3.4

4. In which way are DHs myth enabling?
5. In which ways do DHs curate dietary belief, and what other elements are part assemblage?
6. In which ways do DHs gain semiotic meaning?

3.1 Hashtag Semiotics and Hashtag Narratives: DH Analytical Consideration

Although literature that examines the role of hashtags has moved past a purely structural analysis of this techno-linguistic form, the structuralist semiotic perspective on language lends itself to be a critical departure point in which further thought on hashtag semiology can be developed. It, therefore, becomes meaningful to consider structuralist theory to de-construct the associative connotation of DH, and how these, for example, move within the virtual; later to possibly affect the physical, and again to come back to the virtual as a device in which users perform and navigate Instagram. It allows for this research to trace and describe the elements which form a DH narrative; it also emphasizes the way in which heterogeneous elements associate together in order to make it possible for users to learn ways of eating, as well as contribute to a semiotically made dietary myth.

Structuralism seeks to describe the organization of sign systems within language (Saussure, 1959). Levi-Straus’s linguistic structuralist analysis of food cultures and food myths is the first step in deconstructing the role of the DH. From this standpoint, structuralist thinking leads me to trace the semiotic meaning in the ‘hashtag language’ in the sense that DHs are the myth-making devices which transcribe the reality (lifestyle) of the individual or group. This is a simple ‘signifier-signified’ analysis, which presumes the coherence of a system. For example, if we take the popular DH #glutenfree, the signifier would be gluten free (or the sign of #glutenfree), and the signified would be an individual or group who does not eat gluten. The associative symbolic rhetoric, such as #vegan, #healthy (see Table 2) are associated myth-making signs – thus emphasizing the ‘healthful’ properties of eating gluten free. These symbolic schemes provide the constructs of the particular version of the real that users live in (discussed in detail in section 2.3).

Table 2: Top 15 hashtags most often used with #glutenfree on Instagram. The Table compares October 29, 2015 (1:33pm-9:35pm EST) and October 29 2016 (9:29am-6:59pm).

Term	#instances October 29, 2016	Term	#instances October 29, 2015
#glutenfree	1481	#glutenfree	1535
#vegan	544	#vegan	560
#healthy	343	#healthy	420
#dairyfree	307	#dairyfree	372
#paleo	251	#paleo	300
#food	248	#cleaneating	291
#healthyfood	224	#eatclean	252
#foodporn	221	#foodporn	233
#cleaneating	217	#organic	232
#organic	210	#fitness	202
#foodie	211	#food	199
#plantbased	187	#healthyfood	194
#eatclean	186	#plantbased	179

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#instafood	169	#vegetarian	177
#vegetarian	163	#foodie	178

Structuralist thinking breaks down on Instagram when we consider the structuralist doctrine of an ‘underlying social structure’ which orders individual patterns of eating within an *a priori* collective social. Rather, the temporality and the spatiality on Instagram suppose that there is no underlying ‘social’ that can explain a user’s dietary behavior and henceforth DH performance; it is the links and the formed associations that describe the emergence of a formed way of life – of a user’s adherence to a dietary modality. Although I have abandoned the structuralist thinking that there exists a universal truth that explains ‘why we believe eating this way is healthy,’ Levi-Strauss’s semiotics, which bridges the gap between language and the food people eat, is nonetheless useful for my analysis on the narrative/semiotic structure of DHs.

Latour (2005) also uses many aspects of structuralist theory in his work with an ANT way of thinking. Inspired by Greimas’s¹² structural semiotics of meaning and narrative theory, he views the emergence of a collective social as a semiotic positioning of practiced and associative narrative, which distinguishes the belief system of the group. As Ricoeur (1989) wrote, “what is interesting about Greimas’s narrative grammar is the way it constructs, degree by degree, the necessary conditions for narrativity” (p. 581). Through an ANT way of looking at the emergence of a collective narrative, Greimas’s narrative grammar deconstructs the elements within the assemblage. These elements allow for tracing and describing associations – it is meant to show that community narratives and systems of belief are made by links in the network and do not emerge independently. Instead, the presence of a narrative is the assemblage of heterogeneous

¹² Greimas’s semiotic and narrative model uses the basic tenants of Levi-Strauss’s semiology.

elements. In such a structuralist fashion, the necessary conditions of a dietary narrative on Instagram is composed of the four narrative elements as described by Greimas (1969) (Table 3).

Fundamental Grammar	Semantic: Folksonomy (the user-generated categorization of content with hashtags) Syntactic: Instagram software, algorithms	
Surface Narrative Grammar	Syntactic doing: The narrative utterance (NU) in relating hashtag to content within the Instagram syntax structure NU Types: X user associating with user Y's NU (by following, liking, or commenting on user Y's syntactic doing)	NU: Posting/hashtagging content NU ₂ : Liking NU NU ₃ : Commenting on NU NU ₄ : Following NU
Narrative Unit: Performance	Chain of narrative utterances: All user performances within Instagram are assembled in this technological sphere- which therefore constitutes the narrative unit	Fundamental Grammar + (NU+NU ₂ +NU ₃ +NU ₄)
Topological Representation: The transfer of a narrative from one place to another	Intermediary/quasi-objects: Hashtags are the vehicle of translation. New users form links within the network according to the narrative being portrayed by the hashtag- that is, integrating the DH as part of their online dietary narrative	E.g. #whole30, #glutenfree, #paleo

Table 3: The Instagram narrative model adapted Greimas's narrative grammar (1969).

The four narrative elements are taken directly from Greimas's work on narrative structure. However, this is not a perfect translation of Greimas's four stage model of narrativity. The components of each element have been adapted to fit within the content of Instagram performances and hashtag narratives. Although Greimas's model was not intended for an

analysis of hashtag narratives, it is nonetheless indicative of the sub-surface and surface processes which assemble in such a way as to produce a dietary narrative, and therefore give DHs semiotic meaning.

3.2 DHs: Mediator, Intermediary, or Token Symbol

The structure of the dietary-related stories, and therefore the patterning and narrative dietary beliefs, can be found within what is made visible by DH queries. If we look at Table 3, we can see that the narrative made visible by DHs on Instagram is made up of assembled components within the narrative structure. Following ANT, these components are divided depending on their agential status: actants (mediators) and vehicles of translation (intermediaries). This, therefore, brings into question: are DHs actants or intermediaries?

An actor/actant¹³ is anything that mediates; in other words, it is an object which has the agency to modify the state of affairs. A single word would perhaps on the surface seem as distinctly intermediary since it is the means in which communication is transported from one human to another. According to Latour (2005), distinguishing between the two is the first uncertainty in any ANT research. However, he complicates this further by saying that an intermediary object (and I include language and hashtags as ‘objects’) can become a mediator, and vice-versa.

It becomes difficult to distinguish if a hashtag is a mediator or intermediary. It would be easy to see, from a categorical standpoint, that hashtags are intermediaries, merely organizing online content. However, as Zappavigna (2015) notes, hashtags are linguistically challenging

¹³ To distinguish between a human actor and an object as an actor, I will thus be using actor for a human with agency, and actant for an object with agency

concepts to grapple with. They are not a-priori defined, but they only emerge and made meaningful through association (Sharma, 2013); and in this context, DHs are only made meaningful within the narrative structure made by these heterogeneous associations. Albeit, certain hashtags appear to carry less significance in a user's identity performance than others. For example, #food is not necessarily distinguishing (everyone must eat); but if we look further into more specific DHs, #glutenfree for instance, actively represents a user's particular mode of living. The complexities of DHs suddenly appear relevant when we look how they actively construct distinctions and have a role in virtual user subjectivity performance.

Rather than establishing a firm line between DHs being mediators or intermediaries; from a performance standpoint, it becomes more helpful to view DHs as token-symbols or 'quasi-objects' (to use Michel Serres's (1982) phrase). In this way, DHs only emerge as objects of transformation within the assembled performance on the Instagram network. DHs become representative of the material semiotic reality of a user's dietary modality. From a material semiotic standpoint, each DH is a token-symbol which connotes a dietary standpoint, and a way of life. Following Mike Michael's (2004) notions of 'making data social,' DHs associate the material (the user) and the semiotic (the concept): it is an assembled hybrid. In this way, DHs emerge as the 'quasi-object,' which signifies the totality of the material semiotic assemblage. To put it more concretely, #vegan or #vegetarian is a way for users to showcase their way of life; it is an assembled reality dignified by associative morality. #vegan and #vegetarian have significance beyond its denotative meaning; both for the users performing these DHs and for those who intercept these DHs. As the next section will explore, these DHs are made to associate with a system of values based on collectively assembled utterances. As such, these individual user utterances are the narrative units in Greimas's inspired model.

3.3 The Case of #healthy: On DHs as “Quasi-Object’ in Dietary Learning

What follows uses a walkthrough vignette developed to immerse the reader in the case study under review.

@valerievignette logs into her Instagram account. She is looking for motivation, and for ways to improve her overall health. She uses the Instagram search tool and types in #healthy. 81 738 308 posts are displayed, however, according to Instagram’s algorithm, the top 9 posts are presented first, which therefore increases the likelihood that these posts will be intercepted (see Figure 10).

Figure 10. The results of #healthy search query on Instagram. Dated October 19th 2016

@valerievignette clicks on the second post and examines this user's Instagram account (Figure 11). @fullyrawkristina’s account is full of pictures of health, fitness, and dietary lifestyle motivation. She starts following this account, as well as ‘liking’ some of the pictured content.

Figure 11. @fullrawkristina's Instagram account. Dated October 19th 2016

@valerievignette notices that this account, in regards to how she eats, often uses specific DHs.

Figure 12. @fullyrawkristina's photo. Retrieved and viewed on October 19th 2016

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Intrigued about dietary modalities to achieve the status of '#healthy,' she clicks on the hyperlinked #vegan DH in the user's account (Figure 12). In this instance, she selects #vegan and therefore is redirected to a narrative dashboard of dietary learning (Figure 13).

Figure 13. #vegan search query from clicking on the DH made visible from @fullyrawkristina's content. Dated October 19th 2016.

@valerievignette continues the process of searching, following and liking the visible content from her search queries.

The experience of every user will vary according to which hashtag term they search, their existing associations, which includes how they will perceive which depictions of a healthy diet is

meaningful. However, the vignette shows the ways in which the existing Instagram architecture directs what is made visible by user search queries. Puar's (2012) analysis of Massumi's (2002) 'Parables of the Virtual' helps illustrate the role of the hashtag as part of the assemblage; they are "a matter of force, conveying (not deterministically, but suggestively) who moves where and how and when" (p. 61). As such, the hashtag under search directs the user navigating the Instagram space; therefore, establishing a narrative virtual architecture in hashtag search queries. Hashtags on Instagram do not dictate navigation. However, they offer a pointed narrative on how the user 'reads' and interprets the diets being disseminated to them through DHs. The user of the previous vignette did not need to click on other associated DHs. However, the visibility of such hashtags edges the user to 'walk a certain way' (if you'll indulge the presented narrative architecture framework).

Because Instagram employs hashtags in categorical management (that is – a folksonomic and metadata ordering), the narrative structure, as well as the directive architecture, is a dynamic process of user-hashtag-algorithm assemblage. The visibility of DHs is therefore not static. Instead, DHs are a temporal representation of valued dietary modalities. As the vignette exemplifies, all of the appropriated elements in Greimas's narrative structure (Table 3) shows the ways that these elements associate together to create a comprehensive narrative structure – one that directs a point in Instagram architectural navigation. Regarding dietary learning, @valerievignette's experience shows that #vegan is a valued DH as it related to being '#healthy.' @valerievignette, therefore, learns from the digital communal. As a result, Levi-Strauss's (1969) and Mary Douglas's (1972) writing on ideas on culinary communal food lifestyles have entered the virtual space of Instagram. For example, Mary Douglas (1972) asks the following: "if food is a code, where is the precoded message?" (p. 61) This answer is found in the virtual narrative

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assemblage (as outlined in Table 3), which, on the surface topological narrative, uses DHs and associated hashtags to code food—therefore giving DHs specific semiotic meaning. Similarly, Levi-Strauss (1969) notes that social relations generate the codification of food. As previously mentioned, these social relations now also include the Instagram space, where DHs are the linguistic component in culinary learning. DHs, which include health/nutrition hashtag search queries, can, therefore, present themselves as a narrative ordering mechanism. DHs, along with the other narrative elements outlined in Table 3, assemble to showcase and advocate for ways of eating.

The @valerievignette example shows the ways in which technology (Instagram) is entangled in the assemblage of dietary learning and performance. All four of Greimas's narrative elements enter into the equation when we look at the role of the DH. DHs are dynamic semiotic 'quasi-objects'; they emerge as material and semiotic representations and embody a narrative which consequently comes to represent, in some cases, a subjective reality. In other words, DHs are performed and intercepted; they establish an architecture on Instagram in which users navigate – DHs are not neutral intermediaries because DHs contribute to the ways in which social actors on Instagram (the users) enact performances.

Starting with the fundamental grammar of the modified Greimas's narrative model, the semantic composition of the #healthy narrative incorporates all content that has been hashtagged with this specific DH; which henceforth represents all NU performances (NU: narrative utterance; NUs: narrative utterances). Regarding the syntax, the algorithms, as well as the software underneath the Instagram platform, orders all NUs based on interaction and popularity. In terms of the surface grammar, all NUs assemble to create a virtual architecture. For example, as @valerievignette navigated the Instagram space through hashtag search queries, the content

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made visible to her was based on the Instagram architecture – which is an assemblage of NUs.

Although the architecture is a dynamic narrative process (because of the folksonomic component in narrative ordering), it should be noted that what is made visible by hashtag search queries are temporally similar. Hashtag search queries create a normative narration. For example, I have tracked the use of #glutenfree over the period of one year. The textual analysis of hashtags most often used with this specific DH (from October 28th, 2015 in comparison to October 28th, 2016) are fairly consistent (see section 2.1, Table 2). It, therefore, shows that the assembled narrative of DH search queries, even though they are managed by user-generated NUs, create a somewhat constant architecture in virtual dietary learning.

Although health plays a major role within DH cultures, it is nonetheless not the only takeaway point of DH narratives and affiliation. As vehicles of translation, the DH is a way to bridge the gap between modern social development and technological interaction. Previously, a communal act and quotidian tradition (imagine the traditional dinner table scene), enables individual learning on appropriate dietary behavior. In many ways, eating has been removed from the physical communal and appropriated into the virtual. The photo of a meal, and the act of posting this photo on Instagram, is a way of sharing our everyday eating experiences with other users; with communities of users. Users use their everyday eating practices to connect with a virtual community when they are eating alone or in a small group, or even a way to relate to others who share the same dietary modality (when those physically around have different ways of eating). It is in this way that DHs are techno-linguistic 'quasi-objects,' which enable a link between the virtual and the material world of narrative utterances in modes of food consumption. The semiotic properties of DH (the surface narrative of DH search queries) emphasize the

concept of a dietary modality, whereas the material aspect of the DH (as an object) is a site in which user's materiality (the way they eat) is performed on Instagram.

As the DH is increasingly transmitted in the network, it becomes increasingly punctuated and reified, therefore establishing a narrative which represents subjective reality; and, according to Michel Serres (1982), these “quasi-objects have increasing specificity” (p. 232) as they are being interacted with within the social. In this case, the movement of DHs (the 'quasi-object') and the formed associations with these within the network enable for a specific narrative to emerge – that is, it is a way for users to both perform and learn. What is interesting in thinking through ANT in technology-enabled associations in this research is that the folksonomy of hashtags enables the performance of bottom-up power, where the way of knowing, that is a way a user knows what is healthy or unhealthy, is an aggregate of user/technology interaction. This demonstrates the ways in which Instagram acts as a techno-cultural platform in dietary learning. Although it is important to note that top-down power still trickles down in Instagram, for example, *Wheat Belly* (2012) emphasizes the healthfulness of avoiding gluten, and *It Starts With Food: Discover the Whole30 and Change Your Life in Unexpected Ways* (2014) establish the do's and don'ts in food consumption¹⁴, the assemblage of content tagging on Instagram creates a new visual narrative on the proper way to eat. Through the performance of DHs, Instagram introduces a new way of knowing, and a novel way to understand the 'real' because it introduces a new 'regime of truth' through bottom-up narratives.

¹⁴ Which coincidentally advocates for a gluten free diet (no grains allowed).

3.4 Dietary Belief and Dietary Mythologies: Investigating Instagram and Culturally Made Food Myths

Ways of eating are culturally significant, and the ways in which certain food protocols are emphasized over others depends on the cultural environment. As discussed in the previous section, Instagram presents certain dietary narratives, which curates the way a user learns about food, nutrition, and diet. It became apparent when looking at @valerievignette's Explore page that DHs make visible certain food consumption lifestyles (see section 3.4.2 Figure 17-19).

Although these are dictated based on the user activity on Instagram, it nonetheless remains that certain dietary myths are made more visible through #healthy search queries. But what exactly is being disseminated here? And what role do DHs have in enabling food/diet myths?

3.4.1 Theoretical Considerations: Demystifying the 'Black Box' of the DH

To answer these questions, I turn back to the theoretical considerations introduced in Chapter 1. Of importance to these ideas, the theoretical precursors to ANT help outline a way to understand the way in which DHs are made to be significant quasi-objects in the dissemination of healthful eating habits on Instagram. Ethnomethodology and semiology emphasize the ways in which facts move through modalities. Garfinkel's ethnomethodology reminds researchers to look at how people make sense of their everyday world. This includes the concept of how, as rational actors, people are 'made to know' something as 'fact.' It includes where actors get their information, be it the mass media, scholarly studies, or word-of-mouth from associative peers. Greimas's semiology, on the other hand, looks at the mediator that associates the concrete with the abstract. Related to ethnomethodology, Greimas looks at the structural level of narratives

and how certain assertions are made meaningful by contraries (Greimas et al., 1989)¹⁵. For example, he looks at the framing of narrative segments in discourse, which are the ways in which a ‘fact’ is made meaningful by distinguishing itself from the other (i.e. gluten free, whole30, and vegan are framed as healthy, GMO is framed as unhealthy). Therefore, combining these two ways of thinking, you can trace the dynamic movement on how something is made known to an actor and how the actor perceives what is being disseminated as ‘real’ or ‘fact’ (the semiology in the narrative framing of the discourse). In the case of looking at the transition of ‘fact’ to ‘myth’, as the ‘fact’ gathers momentum and generate links in the network, the ‘fact’ is less-and-less attached to the point of origin- this is how a ‘fact’ may travel and become the ‘myth’ that is perceived as fact¹⁶. The transition from the input of a fact to the output of a myth is lost, it is unknowable; this is the phenomenon called the black-box effect¹⁷. For ANT, the ‘fact’ and the conditions that made that fact knowable and by whom can become lost in translation as it moves within the network, creates more links, and becomes established nodes in other actor-networks. In the case of food practices, the objectivity of what is healthy/unhealthy is not important here. It becomes a case of describing the ‘black-box’ that created the phenomenon of a specific dietary practice and how a diet, such as the gluten free diet or the vegan diet, act within the dietary matrix (or network if you prefer), to create food myths, food hierarchies, and dietary behaviors.

¹⁵Greimas, introduced the semiotic square in order to represent the deep structure of the semiotic system. For further reading, see *The Interaction of Semiotic Constraints* (Greimas and Rastier, 1969).

¹⁶See *Laboratory Life: The Social Construction of Scientific Facts* (Latour and Woolgar, 1979). This maps the sociology of science before the term ‘Actor-Network’ was developed. It shows the how primary iterations of fact get misconstrued in second-order (and so on) re-formulations of the same statement by other actors. Similar distortions of fact to myth have been exposed in the news concerning climate change. The *IPCC 2007 climate report*, an official UN document, erroneously published an inflated ‘fact’ about Himalayan glacier melting—this ‘fact’ was lost in translation due to the processes of third-order source circulation (removed from the fact’s origin). It resulted in an eventual retraction. See [URL] <http://www.globalresearch.ca/glacier-meltdown-another-scientific-scandal-involving-the-ipcc-climate-research-group/17155> for full detail on third-order interpretation of ‘fact’.

¹⁷ The simplification of translation from input to output create a ‘black box’. What is knowable is only what is on the outside. Consideration of the elements in this black box maps the way in which input becomes output.

“The objective reality of social facts,” in this case, a member’s adherence to a dietary practice/mythology, should be understood “as an ongoing accomplishment of the concerted activities of daily life” that should be studied by examining the ad hoc performances of daily life (Garfinkel, 1967, viii). This means that research in dietary performances should not preemptively suppose the ‘social’ and the ‘cultural’ as the cause of food consumption patterns – from an ethnomethodology standpoint, observations must be made by looking at the daily practices of individuals and how these are enacted as well as how these practices are associated with others. According to this way of looking at dietary modalities, Garfinkel’s ethnomethodology asks social theorists to trace and decode the ‘black-box’ of the specific dietary mythology. In other words, it is making the phenomenon of a specific dietary practice (why do people eat this way?) known by describing the associations that create the dietary collective. I engage with this way of thinking instead of attributing ‘social facts’ as an explanation of food practices and dietary beliefs. In this section, it is these ideas of ethnomethodology and semiotics (Greimas’s adapted narrative model and semiotic insights into framing) with the case studies in the dietary mythologies/practices as represented through Instagram, with a particular focus on how DH contributed to a user’s ‘way of knowing’ about dietary practices, and for example, how users co-produce the emergence of a dietary mythos through their shared performance of DHs and engagement with DHs.

3.4.2 Walking Through Instagram-Enabled Dietary Myths: A Case Study on #healthy and #glutenfree’s Mythological Discourse

What DHs do #healthy make most visible? Table 5 shows the DHs most often used with #healthy¹⁸ in two dates. Although there are discrepancies in the qualitative data, these two data

¹⁸All other non-DH were excluded from this list.

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points insinuate that there is a consistent mythology being disseminated via DH content. That is, the dietary ideas that are being propagated as being a healthful dietary approach are not necessarily scientifically justified, but it is given status based on repetitive co-occurrence with hashtagged ‘health’ claims. It is not to say the dietary ideas that these DH promote are scientifically invalid, but it shows the ways in which DH are made meaningful is based upon their semiotic value. To extract the actual semiotic meaning of a DH, I use #glutenfree as a case study within the walkthrough method. This particular DH is selected because this dietary protocol is a recent addition to ideas about the ‘right way to eat.’ Culinary historian Clifford Wright wrote about this ‘diet fad’ in a *New York Times* article in 2014. The gluten free diet is an example of the ways in which fact becomes so removed from reality that a ‘black box’ phenomena arise. That is to say that the reality of eating gluten free becomes mystified, and it becomes generally understood as a healthier way to eat. As he wrote: “How in the world did less than 1 percent of the population with celiac disease, a genetic disorder, kidnap the gastronomic narrative of the remaining 311,000,000 people in the United States concerning gluten...” (Wright, 2014). The answer to this question is not necessarily straightforward. However, what is important is to consider in the context of this research is the way that gluten free, and #glutenfree, is being disseminated and understood online. When we open this ‘black box,’ swarms of other elements appear. How are these narratives fostered? And what semiotic structures enable the myth-making of #glutenfree?

While navigating Instagram using the @valerievignette pseudonym, the visibility of #glutenfree was apparent, even without a direct #glutenfree search query. In comparison to other dietary specific hashtags, #glutenfree is frequently used (Table 4). The high frequency of use is the first semiotic inference of #glutenfree: it means that this DH has a high user visibility. It is,

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therefore, telling of why @valerievignette intercepted #glutenfree frequently in food/health/diet related hashtag search queries, and in her Explore page once she started liking posts and following users (as described in the walkthrough vignette, see both section 2.2.1 and below).

Although the indicated Tables do show a trend which leads to a correlation to be made, it is also important to consider how this correlation happens in practice to understand the causality of DHs on user beliefs in regards to healthy food modalities. Therefore, to show that #glutenfree is a prominent methodological NU within the #healthy ecosystem, consider the following case study, which like the previous section, uses the walkthrough vignette strategy¹⁹.

Dietary Specific Hashtags

Instances of Use on Instagram

#vegan	34120814
#glutenfree	12446044
#vegetarian	11024138
#paleo	8870958
#southbeach	4318307
#weightwatchers	4184915
#whole30	2082822
#rawvegan	1882915
#keto	1602838
#lactosefree	479463
#atkins	428361
#pescatarian	177937

Table 4. List of instances of use of popular dietary specific hashtags as of December 13, 2016 at 12:03pm EST. These outline specific dietary protocols (i.e. #vegan), and does not list more ambiguous DHs (i.e. #cleaneating).

While navigating Instagram using the @valerievignette pseudonym, the visibility of #glutenfree was apparent, even without a direct #glutenfree search query. In comparison to other

¹⁹The date and time selected were not pre-determined and were selected at random. This walkthrough vignette was conducted one time to gather this data. It should be noted that #glutenfree may not always appear in the top 9 results in every #healthy search query, however it is prominent enough that it is easily intercepted if a user searches #healthy on multiple occasions (reflected in Table 5).

Dietary Hashtags

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Although the indicated Tables do show a trend which leads to a correlation to be made, it is also important to consider how this correlation happens in practice to understand the causality of DHs on user beliefs in regards to healthy food modalities. Therefore, to show that #glutenfree is a prominent methodological NU within the #healthy ecosystem, consider the following case study, which like the previous section, uses the walkthrough vignette strategy²⁰.

Term	#instances July 20, 2016	Term	#instances December 14, 2016
#healthy	1378	#healthy	1227
#eatclean	352	#eatclean	282
#cleaneating	335	#cleaneating	253
#diet	289	#healthyfood	189
#healthychoices	234	#healthychoices	166
#healthyfood	218	#foodporn	136
#foodporn	216	#vegan	121
#vegan	167	#healthyeating	96
#healthyeating	102	#protein	68
#organic	89	#organic	61
#protein	79	#glutenfree	48
#vegetarian	62	#vegetarian	47
#fruit	61	#paleo	40
#glutenfree	60	#fitfood	37

Table 5. Top 15 DHs used with #healthy on two dates. Both dates are on Wednesday in order to control for weekly popularity of #healthy use. Both data points were collected from the same algorithms: 100 collected #healthy instances per hour for one day. Some hours exceeded or did not exceed this 100 point benchmark, which therefore answers to the variability in data points from the respective dates.

²⁰The date and time selected were not pre-determined and were selected at random. This walkthrough vignette was conducted one time to gather this data. It should be noted that #glutenfree may not always appear in the top 9 results in every #healthy search query, however it is prominent enough that it is easily intercepted if a user searches #healthy on multiple occasions (reflected in Table 5).

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#plantbased	60	#natural	37
#natural	58	#iifym	36

@valerievignette logs into her Instagram account. Consistent with her previous search queries, she again searches the term ‘#healthy’ to learn about healthy approaches to eating. She clicks on the first picture which displays food content (see Figure 14).

Figure 14. #healthy search query on Instagram. Dated December 30, 2016.

@valerievignette looks at the content within the posted picture (see Figure 15). Intrigued, she starts following @rawvana and clicks on one of the associative hashtags she has often come

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across. She clicks on #glutenfree in order to learn about this way of eating; to see if this is a good/healthy dietary protocol (see Figure 16).

Figure 15. Photo of food posted in the top 9 results of the #healthy search query. Dated December 30 2016.

Figure 16. Redirected page from clicking on #glutenfree. Displays the top 9 results. Dated December 30, 2016.

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@valerievignette continues to navigate the #glutenfree environment, liking, commenting and following the users posting the content. She goes to her Explore page and sees delicious healthy looking food (see Figure 17– most of them are now tagged with either #vegan or #glutenfree (see Figure 18, and Figure 19).

Figure 17. @valerievignette's Explore page based on liking and following accounts discovered through #healthy search queries. Dated December 30 2016.

Figure 18. Example of content found in @valerievignette's Explore page. Example of an emphasis on #vegan and other associative DH terms. Dated December 30 2016

Figure 19. Example of content found in @valerievignette's Explore page. Example of an emphasis on #glutenfree and other associative DH terms. Dated December 30 2016.

As seen through the walkthrough vignette case study, the interception of #glutenfree within a #healthy search query reflects the quantitative data. That being said, it is not the most often used DH associated with #healthy. However, it is prominent enough that it is made easily

visible to users searching for healthful dietary strategies. It, therefore, presents as a good variable to investigate and look how exactly #glutenfree contributes to mythological discourse.

3.4.3 Extracting Quali-signs from #glutenfree: Framing the Myth

I rely on sample case studies, which I have encountered during the walkthrough method, to further explore the idea of #glutenfree and myth. That is, the case studies are used to describe the ways in which hashtags are made to be semiotic quasi-objects in the sense that they enable for dietary myths to form and perpetuate. From this, the quali-signs (as outlined in the methodology) are extracted to gain a perspective on #glutenfree's semiotic contribution in dietary myth-making on Instagram. I looked at the first picture displayed in the top nine results for seven consecutive days at 12:30EST. The dates range from December 30th to January 5th. The selection of dates was done on purpose suspecting that users are more likely at this time to be looking for healthful dietary strategies as part of their New Year's resolutions, which therefore increases the likelihood that the semiotic dissemination of #glutenfree will be made visible to users at this time (e.g. spreading the myth of health)²¹.

	Photo Content	Likes	Comments	Follower Count
December 30 th , 2016	Café in Tulum Beach	8 390	95	333 000
	Associated Hashtags #smoothie #snack #breakfast #bbg #carbs #detox #energy #foodart #foodphotography #foodstyling #fruit #fruits #glutenfree #healthychoices #healthyfood #kaylaitsines #nutrition #organic #paleo #plantbased #platpower #positivevibes #protein #superfood #vegan #vegeTables #vegetarian #veggies #wellbeing #wellness #vegan			

²¹ As it pertains to New Year's resolutions, health resolutions are among the most common ones discussed in social media. Furthermore, in Canada, gym memberships surge by 50% in January. See [URL] <http://www.cbc.ca/news/canada/twitter-compiles-canada-s-most-popular-new-year-s-resolutions-1.3917836> and [URL] <http://www.cbc.ca/news/canada/kitchener-waterloo/gym-contract-bbb-new-year-resolution-1.3928991>

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December 31 st , 2016	Smoothie bowl, avocado toast, porridge, coffee, and fruit	3 322	26	151 000
Associated Hashtags #veganfoodshare #vegetarian #food #foodporn #yum #glutenfree #health #healthy #healthyfood #fit #fitness #paleo #bbg #kaylaimsines #bestofvegan #f52grams #letscookvegan #thefeedfeed #ahealthynut #beautifulcuisines #veganzone				
January 1 st 2016	Raw chocolate cherry tarts	8 687	65	106 000
Associated Hashtags #ahealthynut #vegandessert #healthyfood #plantbased #healthyeating #healthyfoodshare #fitfood #veganfood #veganfoodshare #vegan #govegan #rawvegan #fitspo #veganfoodspot #bestofvegan #vegetarian #glutenfree #feedfeed #vegansofig #buzzfeedfood #vegancommunity #vegano #plantstrong #horngryvegan #wholefoods #paleo #healthtreatsfeature #beautifulcuisines #foodie_features #forkoverknives				
January 2 nd , 2016	Gluten free muffin and carrots	13 991	39	1 000 000
Associated Hashtags #glutenfree #muffins #carbohydrates #healthyplanann #annalewandowska				
January 3 rd , 2016	Gluten free banana-apricot kernel cake	7 777	275	899 000
Associated Hashtags #ourfoodstories #vscocam #vscoedit #vscofood #vscogood #thatsdarling #darlingweekend #f52grams #foodphotographer #foodstylist #foodblogger #foodies #tilcopenhagenfood #glutenfree #glutenfrei #glutenfri #fellowmag #likeandthyme #morningslikethese #inmykitchen #gatheringslikethere #diewochaufinstagram #verilymoment #ontheTable #feedfeed #ardentfinds #beautifulcuisine #provinciallife #eattheworld #bananacake				
January 4 th , 2016	Dark chocolate strawberry overnight oats	4 342	70	172 000
Associated Hashtags #EEEEEEATS #eatclean #wholefoods #goodeats #getinmybelly #glutenfree #vscofood #spoonfeed #thekitchn #todayfood #kaylasarmy #instafood #organicfood #buzzfeast #buzzfeedfood #feedfeed #feedyourself #huffposttaste #foods4thought				

	#newforkcity#noleftovers #nycfat #rsreboot #dcfoodporn #droolclub #dairyfree #eatforabs #healthyrecipes #f52grams #veganfood			
January 5 th , 2016	Siete grain free tortilla chips	6 161	180	1 800 000
	Associated Hashtags #paleofriendly #glutenfree #paleo #paleolifestyle #paleofood #snacks #snacktime			

Table 6. Content analysis of the first post displayed from a #glutenfree search query on 7 consecutive days. Range of dates from December 30th, 2016 to January 5th, 2016 at 12:30EST (see Appendix 1 for raw data)

1st Consideration: Materiality of the Sign

Table 6 breaks down the elements which make it possible for #glutenfree to emerge as a mythic dietary sign. However, it is also important to recognize, not only the semiotic of the sign, but also the materiality of the sign. As Peirce (1868) wrote, the potentiality of a sign is both made from the semiotic and the materiality of the sign (quali-signs). To show how materiality is important to consider when analyzing the composition of a sign, Piers gave the example of the word man written in different media. To quote from Paul Manning (2002):

From a ‘semiotic’ perspective, insofar as we are only interested only in the capacity of these different written forms to convey the word ‘man’, it hardly matters whether the word is written with ink on paper, chalk on slate, a marking pen on a wall, or scrawled with a knife in a desk. But from the perspective of a janitor trying to clean up a classroom, or an administrator trying to determine whether the inscription counts as proper use of the classroom or vandalism, the difference in the material realizations of the sign make a good deal of difference, and these various ‘material’ differences can take on a material and semiotic life of their own subsequently. (p. 12)

Similarly, the material difference between gluten free written on a loaf of bread, versus #glutenfree written on posted content on Instagram has vastly different significance. First, #glutenfree introduces a hyperlink function that is not available outside of the virtual. Second, #glutenfree introduces a representational labeling mechanism in which users may publicly mark their consumption habits. For example, it is unlikely that someone would be able to identify a person’s dietary belief if they looked at that person’s lunch. Given, there may be clues, but until

it is overtly mentioned, it is difficult to say with certainty that a person does not eat gluten. Third, #glutenfree is an element part of the narrative assemblage, which includes algorithmic ordering of folksonomically made metadata. In the last instance, it is precisely the entanglement between the materiality of #glutenfree and the algorithms which sorts culture, food culture, and food myths. According to Ted Stripas (2015), information is categorized online – “where some mysterious entity is responsible for imbuing people and objects with shape, quality or character.” (p. 407). And what is this mysterious entity? It is the proprietary algorithms in media platforms. Algorithms are what give #glutenfree it’s (myth-like) qualities on Instagram. This is not to discount users generated data; however, Stripas (2015) claims it is naïve to believe that it is the users who make information known, in fact, it is the proprietary algorithms attached to the materiality of #glutenfree which give this DH meaning. Figure 17 is an example of this. @valerievignette’s Explore page is algorithmically curated for her. As a result, the semiotic qualities associated with #glutenfree, that is, that this DH is imbued with the myth of health and clean eating, is a symptom of #glutenfree’s materiality (Figure 18, and 19).

2nd Consideration: The Semiotics and Framing of the Sign

Now that the materiality of #glutenfree is established, it is possible to describe the surface elements which enable the dietary myth of gluten free. The second consideration looks at the elements which are made visible to the user, which describes how the sign is perceived. As seen by the associated hashtags from Table 6, the way in which content that uses #glutenfree are framed is a way that they imply (either directly or indirectly) a healthy dietary protocol. Although the data gathered was from a direct search of #glutenfree, the walkthrough vignette strategy in the previous section is demonstrative of the way a user can encounter #glutenfree

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from other search queries in the health/food space on Instagram, which will then redirect the user to a #glutenfree search query if they choose to click on the hyperlinked hashtag. Although Table

Term	#instances October 29 2016	Term	#instances October 29 2015
#glutenfree	1481	#glutenfree	1535
#vegan	544	#vegan	560
#healthy	343	#healthy	420
#dairyfree	307	#dairyfree	372
#paleo	251	#paleo	300
#food	248	#cleaneating	291
#healthyfood	224	#eatclean	252
#foodporn	221	#foodporn	233
#cleaneating	217	#organic	232
#organic	210	#fitness	202
#foodie	211	#food	199
#plantbased	187	#healthyfood	194
#eatclean	186	#plantbased	179
#instafood	169	#vegetarian	177
#vegetarian	163	#foodie	178

Table 7: Top 15 hashtags most often used with #glutenfree on Instagram. The Table compares October 29, 2015 (1:33pm-9:35pm EST) and October 29 2016 (9:29am-6:59pm).

5 displays a small percentage of #glutenfree association with #healthy, these associations are still present. Figure 20 displays the Instagram related hashtags with #healthy. 4/7 post have these hashtags present. Hashtags such as '#healthy,' '#healthyfood,' and '#eatclean' are used to folksonomically categorize '#glutenfree' within the sphere of healthy eating on Instagram. Additionally, Table 6 reflects the quantitative data found in Table 7 – these are indicative of the way in which #glutenfree is semiotically made, and henceforth carry within its sign (#glutenfree) the myth of health. It carries the connotation of health, and the visibility of this projection is in part due to the repetitive association with a hashtag that is related to #healthy. However, the association between #glutenfree as representing a healthy dietary protocol is crystallized by what influential users (those with more than 100 000 ²² followers) post, and how they frame

²²Accounts with more than 100 000 followers only represent a small percentage of Instagram users.

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#glutenfree in their online discourse. In Table 6, for example, all the posts are from users with more than 100 000 follows. Influential users, in part, control the visibility of displayed content from a search query (the top 9 results); and therefore, make the association, the myth of #glutenfree, salient. This research does not question the truthfulness of this claim; however, it demonstrates the ways in which DHs are made to appeal to the idea of a dietary myth— meaning that #glutenfree is understood as ‘healthy’ even though it is not accompanied by an empirical justification. It is only made true or ‘real’ to the user because of attached semiotic qualities (quali-signs).

Figure 20. Instagram suggested hashtags which are related to #healthy.

3rd Consideration: The Assemblage of the Material and the Semiotic in the Making of the Narrative Myth

Looking back at Greimas’s narrative model, the 1st consideration implies the fundamental grammar. It is the fundamental elements within which #glutenfree is employed which make DHs materially distinct. The 2nd consideration implies the surface grammar. That is, once #glutenfree is performed on Instagram (i.e. the use of #glutenfree within the user’s discourse as represented in Table 6), the NU is being interacted with by NU₂, NU₃, and NU₄. Now, if we turn to the assembled performance of the fundamental grammar and narrative utterances, it garners #glutenfree’s meaning. For instance, all the accounts from Table 6 show that these users all have over 100 000 followers. A high follower count means that the increase in NU₃ increases the

sphere of possible interaction with posts from these users, and therefore, NU₂ and NU₄ will also increase. Because of this process, posted content from these users (and other high profile users with over 100k followers) will be made visible to more users, and for example, will show up in the top 9 results of #glutenfree search queries (algorithmically ordered). Because of this increased visibility, these accounts are again likely to receive and increase in NU₂ NU₃ and NU₄. To be put another way, high profile accounts shape the semiotic structure of #glutenfree. Consequently, the final element in Greimas's semiotic model is made. The topological representation of an NU becomes semiotically significant, and in this case, becomes a mythic discourse signifying health.

As Roland Barthes (1957) wrote: "myth is a type of speech, everything can be a myth provided it is conveyed by a discourse. Myth is not defined by the object of its message, but by the way in which it utters this message" (p.117). Therefore, regarding the 3 considerations in the abstraction of the quali-signs, Greimas's narrative model suggests that it is the collection of utterances and the materiality of #glutenfree within Instagram discourse which give this DH the qualities of a mythic speech act. There "qualities (quali) express precisely the sets of properties attributed to the range of events and things, within a wider system of value or regime of signification" (Coupaye, 2013, p. 278). And, as Coupaye points out, this is what Keane (2003) calls a semiotic ideology. It is the assemblage of these qualities (material and semiotic) which enable for the #glutenfree mythos to be made known and perpetuate a semiotic ideology; giving it a meaning in the wider mythic regime of the signification of a healthy dietary approach.

CHAPTER 4

SUBJECTIVE PERFORMANCES AND INTERSUBJECTIVE ASSOCIATIONS

Tell me what kind of food you eat, and I will tell you what kind of man you are.
(Anthelme Brillat-Savarin, 1854, p. 25)

Brillat-Savarin's quotation is over 150 years old. However, that does not discount the significance of the observation²³. Individual consumption foodways have, and continue to, mark one's affiliation with a way of life (be it cultural, ethical, or aesthetic-related). However, the sphere of possible exposure to a different dietary modality has expanded beyond geographical locations. Instagram makes it possible to mark both the individual user's consumptive behavior, as well as make connections with other users via shared DH discourse (ambient affiliation). Therefore, following the introductory quotation, Instagram users tell the public what kind of food they eat with hashtags. The public affirmation links the user within a network representing a consumptive 'reality.' This chapter explores these ideas, along with the ways in which DHs contribute to the making of identity (the projection of individual subjectivity) and aggregates.

Not only is dietary representation examined, but also the way that food and diet are used as a proxy for user materiality. That is, I consider the ways in which DHs operate as part of users' online projection of their physical body. Page (2012) explains this phenomenon; calling hashtags linguistic capital. In this way, hashtags are the currency in which users make themselves visible online. Hashtags make a user's 'reality' and materiality emerge through sustained performance. Sharma (2013) described hashtags from this standpoint, which highlights that hashtags are made to assemble and re-assemble the representation of a shared 'reality'; both hashtags and the phenomenon of hashtag-enabled grouping signify a reality:

They are 'real' in the sense their materiality emerges through how the bodies of

²³Given, the quotation only includes the word 'man'; however, it is to be viewed as 'human'. This reconciles the omission of the female gender.

particular groupings of users mechanically connect with the technocultural assemblage of Twitter, constituted by the informational logics of: user names and profile pictures, hashtags and trending algorithms, software interfaces and processes, data flows and networked relations, inclusion and exclusion, racial dis/ordering, contagious vernacular humour, meanings and effects, etc. (p. 55)

This study looked at Blacktags and BlackTwitter, however, in this chapter I parallel this with the investigation of DHs and DietaryInstagram. In this way, the DH is viewed as a performance device which aligns the user with a way of eating – and a way of being. It demonstrates the personal dietary identity of the user as the DH emerges as part of their online performance, as well as associates them with others who are part of the DH collective. In brief, entering in shared hashtag discourse “... offers the creative potential of entering in the process of becoming” (Sharma, 2013, p. 55): both as an individual, as well as part of a collective.

This chapter considers the post-structuralist inspired concepts in ANT. I examine the ways in which DHs are a way for users to perform subjectivity in the virtual space, a site where their bodies can emerge online through DH representation. DHs are a means by which users can ‘write’ their body into being, and therefore show how their dietary modality aligns with their way of quotidian being. I will also incorporate these ideas to analyze how this subjective performance of the ‘I’ becomes part of the intersubjective ways of learning and community formation.

This chapter begins by outlining the material-semiotic properties of DHs, which will trace how particular associations bring specific DHs into being via acts of performance. I provide an explanation of material semiotics, how it fits with ANT, and how I use this term in my specific study to explore DHs. I take DHs as markers of material semiotic realities, which makes DHs themselves dynamic material semiotic linguistic ‘token-symbol’ or ‘quasi-objects.’ In effect, this way of looking at hashtags investigates the way in which DHs project user made-realities; contributing to the

materialization of that user on Instagram, either overtly or semiotically (RQ3). Moreover, I work closely with the signatures of Actor-Network Theory. These are as follows: materially heterogeneous relations analyzed with semiotic tools, an interest in the circulation of ideas analyzed through an ethnomethodological lens, asking how instead of why, and analyzing these through exemplary case-studies (Law, 2009). This is also the way in which the second section of this chapter will be explored (RQ4). Specifically, I will investigate the emergence of DH communities – for example, how the associations between users, through DHs, leads to the emergence of dietary techno-cultures.

The chapter breaks down RQ3 and RQ4 and asks the following questions:

RQ3: Section 4.1

1. What are the ways in which DHs introduce the user's materiality into Instagram?
2. How do DHs make user subjectivity visible to other users?
3. How are DHs used in the construction of subjectivity and vice-versa?

RQ4: Section 4.2

4. In which ways do DH subjectivities enable for DH intersubjectivities to form?
5. How does intersubjective discourse frame a shared dietary 'reality,' or to put otherwise, the making of a digital communal?

4.1 Subjectivity: What Is It and How It Applies Here

In the previous chapter, the materiality of the DH itself is examined. However, it is also important to consider the materiality of the user, as well as the mechanisms which make this materiality emerge on the virtual sphere of Instagram. As such, conceptualizing hashtags within the context of food/diet and language/discourse requires repositioning both the user (the 'I') and

the object/concept (the hashtag) as meaningful interacting 'quasi-objects.' The post-structuralist movement in food studies since the late 1990's rethinks previous seminal research on food.

These studies emphasize that food and eating behaviors are an emergent process of performance, which are intimately linked with language and discourse (Caplan, 1997). Instead of relying on Bourdieu's (1984) 'class' structure or Levi-Strauss's (1983) 'culinary triangle' (which emphasizes culture), the post-structuralist thinking on food and identity does not so much rely on an 'a-priori' culinary order. Rather, it puts the individual actor in the center of research. As such, Lupton (1996) emphasizes the 'fragmented and contingent' in the formation of a subjective dietary persona. The shift in focus here to subjectivity, instead of applying a static dietary identity to an actor "incorporates the notion that the self/selves are highly changeable and contextual" (Caplan, 1997, p. 15). The constitution of the subject and their dietary modality is made up of interactions through language and discourse. Lupton (1996) wrote that the apparent banality of food is deceptive and that it makes up our subjectivity. To quote her at length:

Food and eating are central to our subjectivity, or sense of self, and our experience of embodiment, or the ways that we live in and through our bodies, which itself is inextricably linked with subjectivity. As such, the meaning, discourses and practices around food and eating are worth detailed cultural analysis and interpretation (p. 1).

This statement remains true today. However, it is performed under different conditions. In the setting of Instagram, where dietary preferences/adherence is being performed in the virtual sphere, language and discourse include the hashtag (and associated DHs) and the platform in which the hashtag is being performed by the user. It is through this lens that DHs, as NUs, will be explored: as markers of subjectivity being externalized through Instagram hashtag discourse. DH use, for example, associates the user to a persona, and the extent to which DHs are used to mark this 'I' is composed of perpetual NUs, one of which being the DH.

4.1.1 DHs, User Materiality, and Virtual Projection

Food and diet-related performances on Instagram cannot be regarded as an invariant and passive act. Nor, as previously stated, is it a static act of banal daily consumption. Rather, the projection of personal eating habits makes possible the materiality of the user known through associated DH discourse. Materialization is made through performed utterances, and the understanding of this form of materiality is contextual based on social associations (Law, 1994). “Thus food and drink may play a variety of different roles within different [contexts] and so may be realized as quite different actors depending on the different ways in which they are ‘made sense of’ within these different communities of practice” (Valentine 2002, p. 3). To come back to the idea of material semiotics²⁴ (Law, 2009), the context within which the act of eating is assembled, including how the heterogeneous elements on Instagram associate (all elements in Greimas’s narrative model) enable for the emergence of a material semiotic ‘reality’; and “crucial to the new material semiotics is performativity” (Law, 2009, p. 150). Therefore, the user’s DH performance, which marks their belongingness to a dietary mode of consumption, is both a performance of subjectivity, as well as a way to mark their place in this made ‘reality’ on Instagram.

To explain this idea, it is helpful to start with a brief look DH-related content found from @valerievignette’s walkthrough on Instagram. Figure 21 and Figure 22 provide examples of the visual depiction of content tagged as #whole30 (Top 9 posts). The performed association these users create with #whole30 is significant. In a deeper look at the individual accounts belonging to the content in the top 9 posts on both dates, #whole30 NUs were perpetual in their Instagram

²⁴This is not to be confused with the material aspect of ‘quali-signs’. Refer to 1.4.2 of this research. Also see Law, J. (2009). Actor network theory and material semiotics. In Turner, B. S. (Ed.), *The new Blackwell companion to social theory*. Malden, MA: Wiley-Blackwell.

discourse. It is, therefore, illustrative of the significance of DHs in the making and re-making of a user's subjectivity – as a way, for example, to assert their consumptive 'reality.' Utilizing Foucault's ideas on 'practices' or 'technologies of the self,' Lupton (1996) notes that the bodies "represent the site at which discourses and physical phenomena may be adopted as part of the individual's project to construct and express subjectivity" (p. 15). So how do we live with our subjective and our physical matter on Instagram when, as Lupton (1996) notes, our bodies are a site to express subjectivity? This is especially pertinent when we look at the ways in which users engage in making their subjectivity on Instagram, where the presence of the physical body is expressed through virtual content and discourse. Following this line of thought, users of the Instagram platform grapple with the discourse and the techno-linguistic hyperlinked language of the hashtag. The projection of their identity (and their bodies) adopt hashtags in order 'inscribe' or 'write' on their virtual body (NU), which consequently can be 'read' by others (NU₂, NU₃, NU₄). What matters in the social media space is the adoption of hashtags in pictured content (as material and semiotic), and what these outwardly mean to the public (expressing one's association with a material semiotic dietary 'reality').

Therefore, DHs assert a made material semiotic reality in which the user maintains their identity and introduces a virtually made user-materiality. For example, every top 9 user posts of #whole30 NUs represent the making and re-making the user's presence: they are #whole30, and #whole30 is their folksonomically marked material reality. From the post-structuralist standpoint, which, according to Law (2009), is important to consider when exploring made material semiotic 'realities,' individual dietary behavior emerges from the language and discourse that surrounds this hashtag, which is learned through the semiology of the hashtag²⁵. These are

²⁵In Law (2009), the author considers material semiotics (and therefore ANT) as an empirical version of post-structuralism. He notes the relation between material semiotics/ANT and Foucault's discourses and episteme.

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represented by the narrative scheme (refer to 3.1 and 3.3.3), which makes possible associative emergence of a folksonomic dietary ‘reality.’ It is this ‘reality’ which users performing such NUs wish to promote and be associated with; and therefore, marks who they are and how they want to be seen. #whole30 in this instance is not just a hashtagged word, when performed it is attached with meaning and fabricates the essence of the users subjective.

Figure 21. Sunday November 6th 2016
4:11pm EST

Figure 22. Sunday January 22nd 2017
4:11pm EST

4.1.2 The Making of a Visible Subjective

In an interview, Foucault said that diet is an expression of aesthetic or self-transformation process in which the body is itself a project of becoming (Foucault, 1984). “The body”, Foucault

(1984) writes, “is molded by a great many distinct regimes; it is broken down by the rhythms of work, rest, and holiday; it is poisoned by food or values, through eating habits or moral laws; it constructs resistances” (p. 87). The body is then a reflection of what we eat, and what we eat is, therefore, significant in the formation of the self and the body. Although the theme of food and diet are never a sustained theme in his writing, his approach to performances of eating signals a way in thinking which intimately links eating with the making of the subject (Taylor, 2004).²⁶ The making of a subject is ethically, aesthetically, and physically/mentally (in the sense of human health) situated²⁷, and it is made salient to the public through the discourse and/or the display of the body. These three categories represent the dominant ideas and displays of diet-related Instagram posts – though, these are not fixed. Certain Instagram user profiles display an amalgamation of some or all, to varying degrees, of these three categories. In this way, instances of diet-related Instagram performances make visible the link between consumptive modalities and subjecthood. These are made, and made public, through deliberate online user acts (NUs).

Figure 23, 24, and 25 are examples of deliberate acts of NUs in making the self visible. These consider the entire profile of NUs for each user. What is consumed by the user, which is displayed through posted content, represents the way in which the user wants to frame themselves; their subjective ‘I.’ For example, through displays of food regimes, a user ‘becomes’ or is in the process of ‘becoming’ that idealized self. Figure 23, similar the profile that is discussed in the next section, represents him or herself uniquely through food. This user becomes embodied on Instagram via dietary representation and DH performances. Although this way of

²⁶ See Taylor, C. (2014). Foucault and food. In P.B Thompson and D.M Kaplan (Eds.), *Encyclopedia of food and agricultural ethics* (p. 1043-1049). Dordrecht: Springer Netherlands. doi:10.1007/978-94-007-0929-4 for complete entry on Foucault’s analysis on food and diet.

²⁷ These categories align with DHs within the sphere of #healthy dietary discourse on Instagram. They were made considering both @valerievignette’s walkthrough, and Taylor’s (2014) Encyclopedia entry on Foucault and food.

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Figure 23. Primary category: physical/mental health (#healthy, #vegan). Secondary category: aesthetics (#veganfitness, #fitness), and implies an appeal to ethics (#vegan)

Figure 24. Primary category: ethical (#crueltyfree, #animalrights #vegan). Secondary category: physical/mental health (#vegan, #veggies)

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Figure 25. Primary category: aesthetic (#weightloss, #fitfood, #ketoweightloss, #weightlossmotivation, #girlswholift). Secondary category: physical/mental health (#healthy, #ketogenicdiet, #paleo)

making oneself public is not overt, it does imply the materiality of the user because, as a viewing public, we are looking at what goes into this user's body; and therefore, get a glimpse of what literally keeps the physical body alive. Figure 24 displays the ethical body. That is, this user represents herself through ethical means of food consumption. She 'becomes' and is materialized as the ethical being. Lastly, Figure 25 shows the way that food is a proxy for aesthetic achievement. Her profile shows before/after pictures, her workout regime, and her dietary modality. In this instance, visual content, along with DHs and fitness related hashtags showcase this user in the process of aesthetic 'becoming.' There three categories, and the use of DHs in Instagram discourse, are nonetheless similar in function. They support the projection of user materiality by means of making public a consumptive reality.

The body and the subject as a project, as an expression of subjectivity, encourages the user to engage in marked discourse in the form of hashtags. The techno-linguistic properties of the hashtag, which is the material component when we consider its quali-sign, is precisely what ‘writes’ the users body, the subject, into being on Instagram. It is an act of subjective performance which, as an end goal, is done to express the user’s attachment to a specific dietary ‘reality.’ Acts of DH NUs are not private acts, since instances of NUs increase the findability of the posts, and therefore increase the potential visibility of the tagged posted content. Paige (2012) wrote that hashtag performance is one of the most appropriate ways to increase visibility: “hashtags are a crucial currency which enables visibility and projects potential interaction with other members of the site” (Paige, 2012, p. 184). If a user marks their online persona via the use of a DH, they attach that DH to themselves, and therefore visibly associates themselves as representative of this hashtag. This last statement, along with Paige’s (2012) quotation, puts into focus how Foucauldian thought on subjectivity helps describe the ways in which DHs are used as a form of cultural currency in the making of the user’s projection of him or herself on Instagram: making public the subject, the way in which the subject (user) wants to be defined, as well to align oneself to a corporal existence linked to a dietary ‘reality’. DHs are meaningful since they express and make visible subjective association, while at the same time revealing to the public the user’s self-constitution: the way a user eats defines both their moral inclinations and their bodily health/aesthetic. It is a way to signify to the public what kind of person the user is.

4.1.3 Identity Making and Identity Informing: The Construction of the Subjective ‘I.’

The previous two sections exploring subjectivity illustrated a macro overview of what was seen on Instagram while looking at DHs and diet/food related user accounts.²⁸ For some users, pictured bodily presence on their profile is over-shadowed by the posted food content. In this instance, the following looks at the ways in which food-related content is a vehicle which enables the materialization of the virtual body (i.e. marks the subject with an affiliated dietary ‘reality’). All elements in the assemblage are taken into consideration in the micro analysis of a single user's Instagram profile. These elements include all $NU_{(2+3+4)}$; however, a strong focus is placed on examining instances of the user’s NU. The user under review is @whole30yogi. As noted in the methodology section, this user was selected since, at the time of analysis, the user did not have a single picture of her physical body. As such, the signification in which DHs and food-related content pose on subjectivity-making can be looked at without the variable of the body present in posts. All images were coded using the subjectification model (Figure 9), and the frequency of the images that conform to these categories are in Table 8. The hashtags used by @whole30yogi are shown in Table 9. Note that no pictures were filtered out, I coded for all the content posted on the account for three months. The analyzed content is dated from to July 20, 2016, to October 17, 2016.

Feature	Whole30yogi dataset (%)		
As photographer	47		
	Inscribe	Infer	Imply
	0	0	100

²⁸These were found through #healthy search queries and affiliated DH queries from the original #healthy search.

With Photographer	19
Non-animate participant	13
Discarded (spam, advertising, etc.)	0

Table 8. Frequency of subjectification features in @whole30yogi dataset

Hashtag	Count	% of use/total # of posts (79)
#Whole30Life	79	100
#Whole30	76	96.2
#whole30alumni	76	96.2
#Whole30approved	72	91.1
#IAMWhole30	70	88.6
#itstartswithfood	69	87.3
#whole100	69	87.3
#whole120	69	87.3
#Whole30Canada	69	87.3
#Whole30Journey	69	87.3
#healthyfood	69	87.3
#realfood	69	87.3
#wholefood	69	87.3
#trusttheprocess	69	87.3
#JERF	69	87.3
#justeatrealfood	69	87.3
#cleaneating	69	87.3
#nosugar	69	87.3
#noalcohol	69	87.3
#nodairy	69	87.3
#nolegumes	69	87.3
#nograins	69	87.3
#changeyourlife	60	75.9
#septemberwhole30	23	29.1
#whole30aloha	13	16.5
#alohawhole30	12	15.2
#selflove	11	13.9
#whole30vacation	10	12.7
#whole30breakfast	10	12.7

Table 9. Frequency of Hashtags used in the 79 posts under analysis

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In Table 8, all pictures under the ‘with photographer’ section are pictures of food. This is significant since it shows that this user is representing herself, in other words making herself public, through images of what she consumed. The composition of the pictures suggests that we see, through her eyes, a scene at her dinner table (Figure 26 and 27). Through these pictures, the public experiences her food consumption habits, and therefore the users ‘reality’ and her materiality as a human becomes evident to the public. @whole30yogi is what she eats, and that is the way she chooses to express her subjectivity. Content featuring non-animate participants are also a way the user constructs herself online. These include motivations quotes, as well as whole30 benchmarks (shows how many days the user has been whole30). The latter is an example of expressing to the public that there is a progressive transformation of the user’s physical body, and as Foucault (1984) notes, it is a public display of self-control for the purposes of either health, aesthetics, or ethics. In this case, purposes of ethics are not displayed in her posts. It is suggested through these images, which include both the ‘as photographer’ and the ‘non-animate participants,’ that these are visual performances in the construction of the body as a project, and more precisely, it is an aesthetic and health-conscious project.

Figure 26. @whole30yogi post. Dated October 8, 2016.

Figure 27. @whole30 post. Dated August 30, 2016.

Subjectivity, the very thing that makes us, 'us,' is still a matter of associations and assemblages of material (the body as a project) and concept; these include not only the images but also the images semiotic affiliation. As Latour wrote (2005): "It is true that the circulation of these 'subjectifiers' is often more difficult to track. But if you search for them, you will find them all over the place: floods, rains, swarms of what would be called psycho-morphs because they literally lend you the shape of a psyche." (p. 212) These 'subjectifiers,' which make up @whole30yogi's 'I,' are her NUs. Indeed, these lend the shape of her psyche since they are public affirmations of a dietary system of belief, but they also lend the shape of her materiality as they display an occurrence of bodily transformation. Her subjectivity is made visible through these NU 'subjectifiers'. However, the pictured content is a single subjectifier; there are other components in NUs which enable for the construction of the subjective 'I.' Figures 26 and 27 are two examples of NUs. They show how NUs are composed of the pictured content, the caption, and the hashtag(s). Table 9 highlights the components in a NU. The three components contribute to the making of the 'I' and in making the 'I' visible and known.

NU (Narrative Utterance)	Components in a NU	
	Visual content	Visual display of acts of user subjectification. The features in the making of user subjective vary per the properties of the photograph (see Table 7 and refer to Figure 9 in section 2.5.3).
	Caption	Message accompanying the publication of the picture on the user's profile. It is also possible that a caption does not appear, only include emoji's, or only include hashtags, etc.
	Hashtags associated with content	All hashtags associated with the posted content. Only the

		hashtags used by the author of the photograph are considered.
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Table 10. Components in an NU explained

If we consider these NU ‘subjectifiers’ in @whole30yogi’s profile, Table 8 indicate @whole30yogi often uses a somewhat consistent hashtag syntax format to represent herself in the virtual (hashtags associated with content). Although these is a clear omission of physical representation, that is, her body is not pictures in any of her posted content, she uses dietary hashtags, as well as photographed images of the food she consumes, to represent her subjectivity in the virtual sphere of Instagram. The repetition of consistent utilization of a DH, accompanied with the visual content enables the emergence of the body, the subjective ‘I,’ even when the virtual body is not present. The caption component of NUs is not as significant here. It merely translates the visual content into words.

Importantly, however, discourse offers glimpses into a person’s subjectivity (Davies and Harré, 1990). It is the performance of DH discourse which makes possible to trace the ways in which diet and food related acts on Instagram make user subjectivity appear. @whole30yogi’s NUs emphasize the importance of #whole30 discourse (Table 9) in the making of her virtual subjectivity, thus allowing for the materialization of the self on Instagram. Following the writing of Karin Barad (2003), ‘matter is not a thing but a doing.’ Therefore, the act of perpetual DH NUs continuous making and re-making of @whole30yogi’s self (or ‘I’) – she aligns herself with a specific consumptive reality. Considering the assemblage of NU ‘subjectifiers’ #whole30 is a semiotic discourse which codes and territorializes the user’s existence on Instagram. From this, it introduces a new way of performing subjectivity online through the representation of dietary consumption; that is, relaying to the public what he or she wants the viewer to see them as. As stated from the opening quotation of this section, Anthelme Brillant-Savarin (1853) wrote: "Tell

me what kind of food you eat, and I will tell you who you what kind of man you are" (p. 25). To reformulate this in the context of Instagram, '*Show me what kind of food you eat, hashtag your dietary performance*, and I will tell you what kind of *user* you are.' New media create new mechanisms for performing subjectivity, and such use of DHs and posted content of food make it possible for other users to understand the identity of the user.

4.2 Subjectivity, Intersubjectivity, and the 'Quasi-Object': Creating a Dietary Communal

Ethnomethodology asks questions on how social actions are embedded in the setting and institutions of a given society (Garfinkel, 1983). Alessandro Duranti and Charles Goodwin (1992) note the following:

Ethnomethodologists argue that both intersubjectivity and the social order are visible in coordinated action are accomplished through ongoing, moment-by-moment social cognitive work; participants display to each other their understanding of the events they are engaged in as part of the process through which these very same events are performed and constituted as social activities. (p. 28).

The authors also argue that there is a need to look at the context in which these actions are taking place, as well as the form of discourse that connects these social acts. Therefore, the seemingly mundane utterances of DHs, as well as the utilization on the Instagram platform, highlight how dietary behaviors are also constituted in the digital sphere. NUs, for example, are made of acts of individual subjectivity. However, DHs are functions in intersubjective discourse. They are a way to mark a connection to a group of people who share similar ideas on ways of eating. In this case, I define intersubjectivity as being a shared linguistic act which shapes ideas and relations among individuals. Every linguistic act of NUs noted from the Greimas's model of narrativity exemplifies the ways in which DHs assemble to form a consensus among individuals in dietary

behavior. User affiliation²⁹ with a DH forms a virtual network of dietary association, relation, and learning.

No longer are preferences of eating established at the dinner table, it is now important to consider how social media, and Instagram specifically, contribute to how users perform dietary modalities, as well as how users form affiliation to dietary communities in the virtual (utilizing DHs as the 'quasi-object' linking these otherwise separate identities). This demonstrates the ways in which subjectivity meets intersubjectivity. As a way of performing identity, as well as a way of performing user subjectivity through the utilization of DHs, users embed themselves within a network made up of ambient affiliation. As Knox et al. (2011) wrote about the metafunctions of language in the production of distinguishing aspects of identity: "These aspects of identity do not occur in isolation however, and they work together as part of actual social interactions between them" (p. 95). As such, the function of the DH in marking the subjective 'I user' cannot be examined in isolation. As previously stated, each NU is assembled, and therefore the ways in which DH link one user to the other is an important feature to consider when we look at the role of the DH on Instagram.

The aim of looking at diet as a link in intersubjective affiliation "... is predominantly to explore the uses to which food is put as part of social life; for example, the ways in which food practices serve to support cooperative behavior or structures of kinship in small groups" (Lupton, 1996, p. 8). Moreover, Levi-Strauss (1970) and Mary Douglas (1975) investigate food from the micro level, in which food and diet are analyzed "... using linguistic terms such as grammar, taxonomy, syntax, paradigm and lexicon" (Lupton, 1996, p. 9). As such, language and shared

²⁹ This could be overt affiliation, which means that a user utilizes a DH in their Instagram discourse (of performs any of the NUs); or a covert act of affiliation, which means that the user 'lurks' DHs through DH search queries and other undocumented cases of affiliation.

discourse (and shared DH discourse) are a way to trace the making of a community through communicative practices and association to a dietary 'reality.' Although these observations are still applicable today, the 'structures of kinship and small groups' have expanded, and the ways in which the linguistic structures of food are displayed also reflect the contemporary social media setting. User displays of subjectivity are NUs, and a subset of these online discourse utterances include DHs.

4.2.1 Linking the Network: DH Subjectivities and the DH Intersubjective

Participating in a DH community, that is, any performance of NUs_(2/3/4), users become meaningfully linked by sharing the common thread of a dietary reality. This shared reality is an example of the way in which these users imagine life should be lived in modernity: it is a shared network discourse (a discourse of association) that bonds users to a consumptive system of belief. The act of sharing a ritualistic process of consumption and having those meanings shared by others is how subjective performances becomes intersubjective associations. In part, the user performance of a DH is a perpetual ritualistic process which is constantly being re-made by each utterance. It ensures the continued affiliation which the intersubjective reality, while at the same time continuously making the subjective 'I.' Table 8 demonstrates an example of this. The user constantly uses the same strings of hashtags in her online discourse. More prominently, #whole30 is used 100% of the time in her posted content. The user's performance of #whole30 demonstrates the ritualistic aspect of DHs in the making of the subjective.

However, this has not limited her reach in creating connections within the DH community. Her sphere of ambient affiliation has increased since her first picture, a trajectory that is like other comparable profiles. She projects herself, and her 'reality' through continued

use of DHs, but this also associates the user with others who share the same belief in a consumptive reality. @whole30yogi's first post was made on December 29, 2015. It was marked by variants of #whole30 (such as #whole30challenge, #whole30life); it received 12 likes and two comments (one of which was her own). Her latest post (at the time of writing), is dated February 5, 2017, has 220 likes and 8 comments. Again, this picture, along with most posted content, is tagged #whole30. The increase in comments is staggered throughout time. Therefore the act of commenting does not present itself in this case as a significant contributor to associating this user within this community. However, the likes over time demonstrate the strength in using DHs in social media discourse. That is, the use of DHs increases the visibility of the post while also continuously marking this account with a consumptive reality. As such, it marks an adherence to a community and invites other like-minded users to practice in the shared performance of meaning-making (through likes and follows).

There are other variables to consider in the significant increase in affiliation through likes. Due to the Instagram's API restrictions, it is not possible to document the follower growth this account has had over time. Although other outside variables are taken into consideration in the propagation of affiliation through sustained DH performances, considering that at present, @whole30yogi has 7550 followers and only 81 people that she follows herself, it is unlikely these affiliations are predominantly made from offline associations³⁰. It is thus fair to conclude, although variably, that DHs increase the likelihood of made affiliation with other users. The searchable visibility, which is a material feature of hypertextual hashtag language, enables like-minded users to create links with one another, made possible by concrete acts of discursive DH

³⁰See appendix 3 for a screenshot to @whole30yogi's profile summary as of February 7, 2017.

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performances³¹. Thus, on Instagram, it is hashtags which function to create links between users, and therefore punctuate acts in shared food consumptive beliefs.

Figure 28 shows an NU from @whole30yogi. This projection of user subjectivity allows for intersubjective links to be created. Since it is a deliberate act of making oneself public, it encourages social interaction. For example, a comment from @malea_guidarelli (NU₃) shows the way in which users form bonds together through foodways. Moreover, Figure 29 confirms that DHs discursively link these two users. Both @whole30yogi and @malea_guidarelli use #whole30 in their online performances, which therefore turns subjective utterances into intersubjective acts: making belongingness to a shared sense of ‘reality.’

Using Garfinkel's concept on ethnomethodology, Richard Alterman (2007) states that “without intersubjectivity there is no human communication, no accumulation of knowledge within a community across generations, and no emergence of complex patterns of social interaction” (p. 815). Hashtags on Instagram thus produce intersubjective chains which link the

Figure 28. String of hashtags in this post (not pictured): #itstartswithfood #changeyourlife #Whole30 #whole30alumni #whole100 #whole120 #IAMWhole30 #Whole30Canada #Whole30approved #Whole30Journey #Whole30Life #healthyfood #realfood #wholefood #trusttheprocess #JERF #justeatrealfood #cleaneating #nosugar #noalcohol #nodairy #nolegumes #nograins. Comment associating one user with another through shared interest in food consumption.

³¹ This includes NU_(2/3/4), and also includes the act to NU search queries.

Figure 29. Example of NU corresponding with user performance of NU₃.

subjective users. It is, therefore, no surprise that NUs, including NUs_(2/3/4), instigate a performance protocol which act as binding points in human and community communication. It spreads beliefs, and affiliates one user belief with the other: it is an act of intersubjective participation. A user performs a NU, and the other users affiliate themselves with this performance by viewing, liking, and/or following the user. The affiliated user proceeds to continue the DH discourse and includes DHs as part of their online performance. This cycle thus continues and territorializes the community as a distinct dietary facet.

4.2.2 The Framing of a Dietary Reality: The Quasi-Object in Instagram Discourse

An ethnomethodologist investigation looks at “the practices that participants use to build and shape in concert with each other the structured events that constitute the lifeworld of a community of actors” (Goodwin, 2001, p.157). On Instagram, what constitutes as this lifeworld is an aggregated of users who participate in shared intersubjective discourse which enables the

making of a techno-community. Food is also a bonding mechanism in the making of a shared sense of belongingness to a community.

Falk (1994) draws a distinction between ‘pre-modern’ and ‘modern’ societies food-related acts. In ‘pre-modern’ societies, the act of eating is both “eating in one’s body/self and being eaten into a community” (p. 20). However, in modernity, the individual is noted as being an autonomous self. As such, Falk (1994) asserts that “the role of the meal as a collective community-constituting ritual has been marginalized” (p. 25). Individualistic moral and medical reasoning is the deciding factor which guides individuals how best to use food: in this sense, Falk (1994) asserts that eating is done for the individual rather than the collective. Although acts of eating still have individualistic tendencies, Instagram has allowed for individualistic associations to be formed over foodways, and therefore translate into an intersubjective discourse which makes possible the assemblage of dietary communities. Falk’s distinction between the ‘pre-modern’ and the ‘modern’ are blurred, as a techno-linguistic discourse on Instagram territorializes dietary-based user aggregates. The repetitious intensity of DHs on Instagram is considered as a dynamic process of making (territorializing) of one’s adherence to a dietary modality, to a communally shared consumptive ‘reality.’ The quasi-object marks, frames, and makes visible users who employ a particular DH in their online performance: it is a ritualistic process in marking belonging. Moreover, these processes also contribute to ‘othering,’ meaning that the individual, associated as part of the collective through DH performance, distinguishes an in/out group. The consequence of this, though perhaps unintentional, is the construction of social stratification based on food consumption.

However, there are no defined segmentations in dietary communities on Instagram; the algorithmically made refinement and DH communal affiliation are made over time. Since

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multiple hashtags can be used in a single post, linguistic dietary performances can include multiple DHs. Given, there are DHs which are used more often with other DHs. Table 7 for example, shows that #glutenfree is most often used with #vegan. Therefore, it displays the compatibility of some dietary modalities with others. The intersubjective discourse which marks belongingness to a dietary community is consequently founded on one or more DHs.

Figure 30. Network associations with #glutenfree. These represent the comments on posts which include #glutenfree in user online discourse. ‘Other clusters’ are not represented here³². Dated October 29th, 2016.

³²‘Other clusters’ represent smaller network associations. See Appendix3 for full network associations.

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Considering the DHs that are under investigation in this research, strings in DH discourse are more prominent than others. #healthy is the umbrella term to describe food modalities which are used to categorize food modalities perceived as the healthier option. Within this, the projection of the 'I' and the making of bonds with other users through DHs are more defined.

Figure 31. Caption from @rawvana on October 29, 2016. Network association with this post been in Figure 30

Figure 32. Hashtags associated with Figure 31.

Associations with in-group members are however not consistent. Figure 30 shows dominant nodes in #glutenfree affiliation within a 12-hour timeframe. Not surprisingly, users who have more followers attracts more users to aggregate around their NUs (through NU₂s and

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NU₃s). These influential users affect the visibility and the framing of the dietary collective. For example, Figure 31 and 32 shows the post from an influential user, one of the dominant nodes found in Figure 30. @rawvana has 933 000 followers; therefore, the content she posts and the hashtags used to categorize these posts (including #glutenfree, #vegan, and #cleaneating) significantly contribute to the way these DHs are framed and contributes to the framing of the dietary collective. Therefore, framing a collective does not consist in reciprocal association. However, what is consistent is the making of ambient affiliation within this dietary collective, regardless of the centrality of the user node. This is made through associating oneself to a DH ‘reality’ through NUs and associating with the collective via NU₂s, NU₃s, and NU₄s. Figure 30 shows the edges that connect @rawvana with other users in the collective. These were made by commenting on the post (NU₃).

The way that connections are made in a dietary community is difficult to monitor. However, the walkthrough of dietary communities on Instagram show that influential users are more visible in DH search queries; and a user follows, likes, and comments on posts marks belongingness to the represented dietary community. Once this connection is made, the association is shown in the user’s Instagram account. For example, when users sign into Instagram, they see a live stream (the home page) of messages coming from their affiliated sources (the people they follow). In @valerievignette’s instance, both her home page and Explore page affiliate the user within a DH community (Figures 33, 34, 35 and 36). The home page presents posts of followed accounts, and these NUs are tied with a DH (Figure 33). The consistent use of this hashtag from followed users and ambient users (not following but made visible on the Explore page) punctuate a sense of belonging to the DH community. More than this, following users who use DHs as a subjective marker ratifies and increases possible future

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associations with like-minded users (Figure 37 and 38). The Explore page, for example, algorithmically defines the user's belongingness to a DH community (Figure 34, 35, and 36); the algorithms filter and caters towards these performances.

Although these network associations and user externalization of DH performances are visible in the Figures below, the extent to which food mediates community affiliation is tedious to quantify. However, if we consider the fundamental grammar function of the algorithms in the making of intersubjective bonds through the shared performance in DH discourse, what is observed is an echo chamber effect: this means that once association in the network are made via DH consumptive 'realities,' users are subject to NUs from affiliated, and DH communal, sources. Writing about the spread of misinformation on social media, Del Vicario et al. (2016) notes the following: "Users tend to aggregate in communities of interest, which causes

Figure 33. Followed NUs on main page (Instagram feed)

Figure 34. NUs on Explore page

Figure 35. Close look at an Explore page NU (@foodbymaria)

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Figure 36. Hashtags used on NU shown in Figure 33.

Figure 37. @foodbymaria's profile page. Displays suggested users (similar to this user)

Figure 38. @rachels.fit.kitchen's NU (found from profiles suggested from @foodbymaria's page)

reinforcement and fosters confirmation bias, segregation, and polarization” (p. 558). Although this study focuses on the echo chamber effect of the spread of misinformation, the same is true in the ways in which the algorithms predominantly make visible communities in which users are associated to. Therefore, belongingness to a DH community on Instagram produces an echo chamber; in which $NU_{(2,3,4)}$ polarizes interconnected group members within their own segment on Instagram. @valerievignette's profile, as exemplified in Figure 31 to 36, confirms the Instagram echo chamber; DH communal affiliation continues the ritualistic pattern in intersubjective discourse. Participation and visibility happen within network association.

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Instagram's technological design and the way that the algorithms work to suggest and associate user aggregates can shape the communication patterns and the structure. This is what has previously been referred to in this research as Instagram's architecture or narrative assemblage. The possibility of searching discourse displays the ways in which community on Instagram is based on language; and how the use of language construe social bonds. As a user engages with and identifies with a DH, they organize themselves around an assembled dietary community – the emergence of a DH collective is materialized vis-a-vis a shared DH discourse. This discourse connects users with a belief in a lifestyle, a way of eating, and a way of engaging the body into Instagram. These assembled connections make ad-hoc communities emerge through DH association – it is a part of a virtual dinner table made up of ambient affiliation. Instagram makes possible only the visibility of intentional food discourse. The projection of the subjective user is deliberately made, and the bonds with other subjectivities are also deliberate acts of connecting with the in-group: either intentionally-made or algorithmically-made.

CHAPTER 5

CONCLUSION: LINKING RESEARCH QUESTIONS

The research project is an exploration of the role that food and diet play in social media spaces. Specifically, Instagram was analyzed; the hashtag, the online form organizing and making searchable speech acts and discourse, is shown as a complex linguistic feature on Instagram. The conclusions from this study illustrate the presence of a new techno-cultural space; where diet-related acts are now also performed online. The role of food for an individual and the communal remain; however, the environment in which this takes place has changed. This presents a real shift in the way that food and dietary information circulate. For example, Instagram's affordances make possible, and almost encourages, nearly quotidian food documentation and/or passive 'creeping'³³. Moreover, user acts (NUs) are an overt assertion of associating the user's online persona with a way of eating, which is representative of the user's food culture and therefore creates a hyperlinked matrix in communal affiliation. This last statement, which considers the examination of RQ3 and RQ4, shows how food and diet (food content, DHs, and user association), are important proxies in identity and user-to-user relation. These insights contribute to the hashtag literature and also make inroads in contemporary food studies. The research shows the displacement in food behavior – acts of eating now include virtually made associations. DH hashtag association, as well the visual/virtual communicative practices, show the ways in which food studies need to consider social media and DH linguistics in future research.

DHs are nuanced in their role; the significance of a DH is linked by processes of assemblage between heterogeneous element. @valerievignette has shown that DHs are surface

³³ This term means the act of looking at Instagram content without necessarily posting any content. In this instance, it is a user pastime in looking at pictures of food on Instagram.

narratives within a complex structure. They are significant in that they turn dietary consumptive acts into metadata, which in turn alters traditional food/diet related protocols. Borrowing from anthropologist Levi-Strauss's (1983) 'culinary triangle,' as well as from Finch and Madden (2006) adapted version of the triangle, Figure 39 is a depiction of the observed patterns in food discourse on Instagram. It links all RQs to answer the following: how is Instagram a technocultural site in the communication processes of diet-related activities? And how do DHs contribute to these processes (MRQ)? Instead of a triangle, Figure 39 depicts a layered assemblage in the process of dietary related activities on Instagram. It takes into consideration the components in online communication (NUs), seminal studies on the role of food and diet in society (Douglas, 1972; Levi-Strauss, 1983; Lupton, 1996; Nestle, 2007), and the entanglement these have with technology.

At the center of the assemblage is the dietary sphere of Instagram, DHs are taken as the indicator which enables learning, mythology-making, subjective-becoming, and intersubjective connections. All NUs are processes of communication which lead to associations to be made within the network. However, new processes in online dietary cultures do not make previous food related observations disappear. Ways of eating are documented as being a learning process (Douglas, 1972; Levi-Strauss, 1983) entangled in myth and ritual (Barthes, 2000, Levinovitz, 2015), a way to represent oneself and the subjective being (Faucault, 1984; Lupton, 1996), and enable shared intersubjective discourse in the making of a community (Levi-Strauss, 1983, Lupton, 1996). These are still present; however, they now extend to Instagram, and the way in which these occur have altered due to the change in communication processes and communication technologies. Precisely, it is the material aspect of the hashtag that leads to a different type of dietary discourse – an altered linguistic state which affects mediation processes.

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Hashtags are techno-linguistic; they hyperlink, aggregate user-generated data, and are made semiotically significant according to folksonomic ordering.

The enrollment on an actor (user) in the actor-network (Instagram) enhances the sphere of possible associations and therefore changes the food/diet landscape. Neil McBride (2003) wrote about these new geographies from an ANT perspective and noted the following:

As mobile communications become an essential part of the life of human actors, irreversibility is established where the technology is embedded in the physical and social landscape, and it is impossible to undo the standard technical infrastructure or go back to a society in which that technology is not used (p. 266)

Although it cannot be stated that Instagram will be used forever, it is fair to conclude that hashtags will remain an online discursive mechanism for online speech-making and folksonomic ordering for some time. It can also be stated that the sphere of user-to-user connections have permanently changed, where geographical locations do not limit the possibility of network formation. Therefore, the role of the hashtag, and therefore the DH, has significant discursive roles in this new techno-cultural (and techno-social) environment.

If we look at all considered heterogeneous elements in the assemblage, and the ways in which they associate together, they correspond to the making of a social and cultural sphere. For instance, when we add in DHs, algorithms, social media software platforms, and user folksonomic performances, users are confronted with non-geographically situated viewpoints in which they draw their relation. While navigating through DHs on Instagram, what can be observed is the relation between these processes: they make visible instances in dietary narratives, attach semiotic meaning, and allow for ambient affiliations. More than this, the DH folksonomy creates and architectural navigation point, entangled with the algorithms, the software, as well as the social media ecosystem, which create continuities in the visibility of

healthy dietary protocols. The sphere of possible associations on Instagram and the implication this has on an individual's sense of self are heightened by the visibility of the 'top 9' Instagram posts based on a hashtag inquiry. Moreover, the body as a 'project' is therefore intertwined with the Instagram platform (as well as the social media ecosystem), in which users are exposed to different ways of thinking to achieve the desired aesthetic body. In line with this, DHs do not lead to predictive user action in user food consumption; they merely operate on a matrix of variable possibilities. Therefore, the influence of a specific DH to a user's food modality is never a static acceptance – it represents one of many dietary possibilities which will enable a user's aesthetic goal or the attainment of their 'body project'.

Instagram is a mostly visual platform where users perform their virtual identity (and subjectivity). Brain and cognition researchers Charles Spence et al. (2016) have stated that 'digital grazing,' which is the virtual consumption of food images and video, is having an impact on user's eating behaviors. As such, the aesthetics of pictured foods tagged with a food-related hashtag have been documented by neuroscientists as affecting the user's consumption food patterns and dietary performances (inside and outside of Instagram). Other neuroscientists, such as Morten Kringelbach (2004), emphasize that people's sensory systems are used to evaluate consumptive food sources, and these are largely based on associative learning. From the observations in this research, the evaluation of food consumption is learned from the emergence of dietary narratives on Instagram, which is enabled by the semiotic and the material affordances of DHs. Instagram is, therefore, another variable in the way in which a person acquires dietary information, received through cognitive visual cues and mediated by the standards established from the techno-cultural. From this point of view, digital technologies and the modes in which pictures of food are circulated and organized become part of the ways in which users perform,

identify, or alter their dietary mode. As Levinovitz observed, “Once adopted, such practices become an important part of one’s identity and therefore hard to question or give up.” (p. 27)

The visual stimulation of pictured food, the concept of achieving bodily satisfaction through diet, and making associations by marking membership to the in-group reflect a digitally made technological. The DH is significant in the ritualistic aspect of dissemination (dietary learning) and adherence (DH performance).

To refer to the quotation at the beginning of Chapter 3, Ferguson wrote that all the images tagged #Whole 30 “looked so good and good for me and I wanted to jump on the bandwagon” (Ferguson, 2016). Neuroscientists state that the user’s visual sensory informs the user’s future and present food consumption pattern, and for this one user, she evaluated the pictured food based on the associated connotation of #Whole30 which was, for example, learned through other users online dietary performances (NUs). The act of ‘digital grazing’ through the Instagram platform is, therefore, a way that users are informed of ways of eating, which they may or may not adopt. However, the visibility of certain DHs over others introduce users to repetitive encounters with specific ways of eating. The ‘findability’ of these DHs based on popular searches such as #heathy (91 274 990 posts), #diet (33 390 149 posts), #eatclean (39 235 662 posts) #cleaneating (28 846 880 posts), and #healthyfood (23 789 887 posts)³⁴, present themselves as linguistically salient navigation tools into the Instagram discourse on ‘what is the healthy way to eat’. This is how instances in NUs are associated with learned foodways, algorithms, software interfaces, and the affordances created by the technological device. DHs are searchable talk which enables for the learning of ways of eating. The performed utterances of

³⁴These represent the number of public hashtag utterances dated until March 2nd 2017.

Figure 39. The technologically-mediated dietary sphere. Assembled elements in the techno-cultural space on Instagram in relation to diet-related communication processes.

DHs project a user's dietary 'reality.' It is in this way that Instagram operated as a techno-cultural sphere. It allows for culturally based learning (foodways), ritualizes the dietary myth as part of user performance (belief, values, and myth), displays a user's subjective (foodways/belief, values, and myth), and bonds users based on a shared discourse (community).

Figure 39 represents the associative logic between these elements; it shows how each are linked to the other, which forms a techno-cultural sphere. DHs and related online utterances

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demonstrate a user's attachment to a way of eating (a foodway), they associate that user to a community who share the same dietary modality, as well as distinguishes the user and the community's belief, values, and held dietary myth regarding healthy eating. Figure 39 also illustrates other associated processes in the assemblage. The technological device which is used to access Instagram affords a new environment that fosters seamless sharing of food consumption, and for certain users, it becomes part of an almost daily ritual. More than this, the constant availability to search other users online dietary performances allows for users to see a constant stream of food-related content – it is a new platform for dietary learning. The algorithms and the software/user interface regulate the way a user navigates the Instagram environment. The software interface and the technology/device affordances control user's action when interacting with the application. The algorithms, along with NU performances, shape what is made visible and creates a folksonomically-made architecture in the navigation of the user interface.

@valerievignette did not participate in posting content; however, her interaction with the application shows the algorithmic and folksonomically-made environment, and how this consequently tied her to a foodway, a community, and system of belief and values. From the first instance in @valerievignette's Explore page, to the last instance in her Explore page, it is evident that her NU₂s and NU₃s tailor what is made visible to the user. Instagram's interface and its algorithms punctuate her membership to a digitally made communal, one that was learned from Instagram's techno-cultural space. DHs drive the associations among member's part of the dietary community. Figure 41 shows one example of the role of DH discourse in the making of the individual, and marking the individual as part of a DH community: #vegan, #vegansofig (vegans of Instagram) display this discursively made association. As this research has shown, DHs make possible the association between the heterogeneous elements in dietary assemblage –

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one that dictates learning, dietary myth-making, the projection of the user's dietary-made subjectivity, and communal links based on dietary performances displaying membership to an in-group. All RQ's considered, the DH-Instagram relationship fosters communication practices in which diet-related acts are made meaningful online.

Figure 40.
@valerieveignette's
Explore page before
tailored NUs

Figure 41. @valerieveignette's Explore page after
tailored NUs

Appendix 1

Figure 42. Profile statistics of @valerievignette as of March 1st 2017.

Figure 44. Sample list of posts @valerievignette likes as of March 1st 2017.

Figure 43. Sample list of users @valerievignette follows as of March 1st 2017.

Appendix 2

Data Sets Used to Extract Quali-signs- From December 30th2016 to January 5th, 2017

Likes: 8 390 Comments: 95

Figure 45. First post displayed from #glutenfree query. Dated December 30th, 2016 12:30EST

Likes: 3 322 Comments: 59 @directed links: 26

Figure 46. First post displayed from #glutenfree query. Dated December 31st, 2016 12:30EST

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Figure 47. First post displayed from #glutenfree query. Dated January 1st 2017 12:30EST

Figure 48. First post displayed from #glutenfree query. Dated January 2nd, 2017 12:30EST

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Likes: 7 777 Comments: 275 @directed links: 101

Figure 49. First post displayed from #glutenfree query. Dated January 3rd, 2017 12:30EST

Likes: 4 342 Comments: 141 @directed links: 70

Figure 50. First post displayed from #glutenfree query. Dated January 4th, 2017 12:30EST

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Likes: 6 161 Comments: 180 @directed links: 112

Figure 51. First post displayed from #glutenfree query. Dated January 5th, 2017 12:30EST

Appendix 3

Figure 52. @whole30yogi's profile summary. Dated February 7th, 2017.

Appendix 4

Figure 53. Network associations with #glutenfree. These represent the comments on posts which include #glutenfree in user online discourse. The network analysis shows all clusters. Dated October 29th, 2016.

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