PART II

DEVELOPING A POSTHUMAN
APPROACH:
A FRAMEWORK AND INSTRUMENT

Chapter Summary

5. Developing the Intrasubjective Mediating Framework

Simply put, before we can truly achieve media literacy, we need to be self-literate. This involves moving beyond the 'content' of *who* we are and becoming knowledgeable as to *what* and *how* we are as a complex system. The 'what' can be understood as the structure or cartography of relations that constitute our selves and the 'how' is the complex process of our mediated constitution. Both give rise to a system of becoming that is continually emergent and complex. Media technologies are a part of this process and are also affected by—and affect—the other constituting relations in our lives. In order to comprehensively understand and situate media literacy, I develop a two-part posthuman approach that consists of 1) an intrasubjective mediating framework developed in this chapter[1] along with 2) a pragmatic instrument that leverages the framework in Chapter 6.

This process of situating is a means of providing context, and as Anthony Wilden (1980) states, 'if there is one constantly recurring question for a critical and ecosystemic viewpoint, it is the real and material question of context' (xxix). I first describe the process of how we intra-relate with the world *through* the transformations caused by the various relations in our lives. I then create a simple structure that brings these constituting relations into six groupings: technological,

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1   Parts of this chapter overlap with the chapter I wrote (Lewis, 2020) for the book *Perception and the Inhuman Gaze.*

sociocultural, mind, body, space, and time. And finally, I describe how both structure and process are involved in an interrelating dance of complexity.

The co-constituting technological relation from postphenomenology —described as I-technology-world (Ihde, 1990)—is leveraged in this chapter to also include groups of relations beyond the technological. The focus is on the continual transformation of the human subject through all of the relations that influence the subject and the subject's experiences in its lifeworld. Because the focus is on the constitution of the 'I' component, the constitution of the 'world' component of the equation is only indirectly addressed, not because it is not important, but only because a primary focus on how the world is constituted through this process is outside the scope of this book.

Discussing the complexity of structures and processes, Tim Ingold (2013; see also Grishakova, 2019; Rubin, 1988) points out that there are two different approaches. One approach is to have a complex structure and a simple process. In this scenario, the complex structure determines the process of the system, and the process simply follows the rules dictated by the structure. This creates a situation with little to no free will and follows the structuralist and determinist schools of thought. Instead, I follow Ingold's recommendation and use a simple structure that relies on complex processes, leading to the emergence of the human becoming.

We are not simply aggregates of all of our relations added together. Instead, our constituting relations interrelate in an emergent dance of complexity. These relations enable and constrain each other in unpredictable ways. By understanding our selves as these complex systems of becoming, we are better able to situate specific relations— such as with media technologies—into the broader whole.

Situating the Intrasubjective Mediating Framework

One way to position an argument in philosophy is by using difference, a negative approach showing what something *is* by illustrating how it is *not* like something else. This often follows a reductive approach that uses binary oppositions. Rather than using this negative approach, I use a positive and inclusive approach, looking for similarities to what already

exists in various research fields and then bringing them together in a comprehensive and situating framework. The bringing together of many fields of research into one framework helps to leverage what has already been—and is continuing to be—studied in order to better understand the human subject.

For example, Michel Foucault's (1995) power discourse, Donna Haraway's (1985) cyborg manifesto, Michel Callon and Bruno Latour's (1981) actor-network theory, Don Ihde's (1990) postphenomenology, Rosi Braidotti's (2013) posthumanism, Martin Heidegger's (2010) being-in-the-world (*Dasein*), Karen Barad's (2007) agential realism, and so on; all of these amodern (as in not modern), relational thinkers have made profound contributions to an understanding of our selves and our place in the world. They have helped overcome much of the subject/object dichotomy and helped describe the human subject in a more relational manner. However, like the proverbial group of blind people describing an elephant by touching different places on its body, they all are correct, but in a limited way, missing a unifying perspective. By approaching the subject through an interdisciplinary lens, there is a better chance of coming to a transdisciplinary understanding of the human subject by creating an inclusive framework that can accommodate many of the ideas that come from various relational disciplines dedicated to understanding the human subject.

While the main fields I have used so far—postphenomenology, media literacy, media ecology, complexity, and posthumanism—bring certain benefits to understanding the human subject, each has certain limitations concerning the creation of a unified framework that can help maintain an inclusive perspective. For instance, postphenomenology contributes well to our pragmatic understanding of the constituting nature of technological relations, but it is technocentric and lacks an approach to leverage the concepts of a culturally constructed 'body two' (cf. Ihde, 2002) and sedimentation. Postphenomenology has also been criticized for not being critical enough on the normative and ethical issues surrounding technology (cf. Lemmens, 2017; Scharff, 2006; Thompson, 2006). As for media literacy, it has various approaches that contribute in many beneficial ways, including critical media literacy that brings the influence of critical cultural theory into the dialogue. However, media literacy lacks a focus on the impact of the technological medium.

It also lacks an effective approach for understanding the impact of the broader context that the media are used within, as domestication theory demonstrates.

Media ecology, which effectively investigates the impact of the medium itself on the human subject and society. However, media ecology is less able to provide a way to pragmatically understand specific technological relations and how sociocultural aspects such as representation, power, and gender also co-influence the effects of the technological media. And finally, philosophical posthumanism helpfully provides a focus on the complex transformations of the human subject in a non-humanist, non-dualist, and non-anthropocentric manner, but it lacks a pragmatic way of investigating specific relations, including technological, which contribute to the constitution of the human subject.

The posthuman approach I propose creates a solution for these problems without losing the valuable contributions of each field. Holistically, this provides a way to situate media literacy investigations into an all-encompassing framework. By so doing, this allows investigators to keep a broad perspective while facilitating a deep analysis into any of the specific areas.

Critical media literacy opens the field of media literacy to influencing relations beyond media technologies by including the effects of structures of power and privilege embedded within media messages (Kellner & Share, 2005, 2007). My point in this chapter is to demonstrate how media literacy can expand even further by including the effects that time and space as well as body and mind have on our selves and our media relations. Adopting a more inclusive framework for media literacy can help us understand how our media relations affect all the other relations in our lives and vice versa. We are immersed in an environment of complex relations, most of which are in the background of our awareness. The literacy aspect of my framework is the effort to foreground these relations in order for us to become aware of them so we can choose how we might engage with them.

I begin this chapter by discussing the process in which we continue to be affected by the non-neutral transformations that we experience through our relations. I then propose a structure in order to include all of the relations that contribute to our constitution. This helps bring attention beyond the technological to the other groups of relations that

also contribute to our constitution. My goal is to help us become more literate about our selves, not necessarily to answer 'who' are we—as that is akin to a content question—but rather 'what' are we? This approach is similar to Marshall McLuhan's (1994) aphorism, *the medium is the message*. How does *what* we are affect *who* we are? And, how do our processes and engagement with the world—the *how* we are—affect how we exist and *become* in this world? Only by better understanding the what and how of our existence will we then be able to situate media literacy and the various relations that contribute to constituting the human subject, thus enabling the development of a comprehensive perspective. This reduces the tendency towards deterministic claims that focus on only one or two specific factors. By establishing this framework, we can become more aware of what contributes to the constitution of our selves in a holistic and encompassing manner.

Intrasubjective Mediation

To more deeply explore what it means to be constituted—or transformed—by our relations, I introduce the concept of *intrasubjective mediation*. While constitution and transformation can have slightly different meanings, I will use them both to describe the process of becoming. The concept of intrasubjective mediation helps to identify how the transformations that take place due to our relations both affect and continue to affect how we perceive and engage with the world. As Ihde (2009) points out, 'Technologies transform our experience of the world and our perceptions and interpretations of our world, and we in turn become transformed in this process. Transformations are non-neutral' (44). The first sentence in this quote describes the constituting effects of the six groups of relations, and the second sentence gets to the core of intrasubjective mediation.

I define intrasubjective mediation as *the process of how the transformations that occur in the human subject through technological, sociocultural, mind, body, time, and space relations mediate—and continue to mediate—how the subject perceives and engages with the world*. What intrasubjective mediation enables is the ability to understand how all of our relations continue to contribute to our constitution through the transformations that originally took place. How this relates to

the technological relations described by postphenomenology is that every technological relation—be it embodied, hermeneutic, alterity, or background—leaves an intrasubjective transformation that we then perceive and experience the world through.

For example, a GPS enabled mapping app on our smartphone allows us to explore a new city differently than if we did not have this technology. After we become familiar with using the GPS app and have had positive experiences navigating new areas with the app, our confidence in exploring new places can increase. In addition, as we become less concerned with getting lost, we become different travelers. We are travelers transformed. Enabling and constraining still occurs, and we will likely have new concerns, such as our phone's battery level and finding cellular access spots.

We interact with every relation in our life through an assemblage of our current relations and the accumulation of our transformations caused by the relations we have already experienced. I build upon postphenomenology's embodied relation in order to conceptualize this process. Intrasubjective mediation creates a language for investigation and a method of inquiry to explore the transformations that happen within the subject due to specific constituting relations and how we continue to engage and perceive the world through these transformations. This moves our initial focus on an individual relation experienced in the present moment and expands our attention and awareness in order to perceive the current interrelating relations as well as the accumulation of all our experiences gathered together.

Why Intra?

At first, the idea of *intra*-subjective mediation may seem somewhat confusing. After all, what does it mean to be mediated by an aspect within our selves? Why use 'intra' instead of simply using 'subjective mediation?' I do so because 'subject' is often conceived of as singular, equating to the entirety of our selves. 'Intrasubjective' points to a more specific internal aspect that contributes to our overall constitution. Our subjective self is not a unified subject, but a multiplicity through which we intra-relate (Lamagna, 2011). Therefore, in order to know our selves more fully, it is helpful to understand these relations and how they

contribute to our continually constituted subjectivity. Additionally, the way a subject perceives the world through the intrasubjective relations can vary, depending upon the context of the situation; how the subject is feeling: whether they are stressed or relaxed; what is currently motivating them; their particular upbringing; etc.

The intrasubjective mediating framework developed below creates a way to investigate both the current and continuing impact from relations, which in the case of media technology will help us to become more media literate by understanding the broader effects of media technologies. While my primary focus will continue to be on technological relations, I will situate them within a framework that includes five other groupings of relations. Before describing the specifics of how intrasubjective mediation works through a type of embodied relation, I will first describe all six groupings of relations that make up the framework.

The Intrasubjective Mediating Framework

In order to leverage the concept of intrasubjective mediation, I first develop a general framework before then creating a pragmatic instrument that can be used for media literacy (Chapter 6). To begin discussing the framework, I start with the foundation of our existence—one with no hard boundaries of separation that is instead interrelated and emergent. I gather all of our constituting relations into six groups, which enables us to look deeply into the particular qualities and aspects of each group while remaining cognizant of the other groups.

This chapter builds on the concept that we are multi-relational, that there is never just one relation involved with anything we do in any single moment. There is a tendency to perceive technology and media in a gestalt-like manner—all at once and often as one thing. This can erroneously translate into thinking of media technology as a single relation, instead of multiple relations happening at the same time. For example, I can analyze my relationship with my smartphone. At first, it can feel like one relation, as the object being one 'thing'. However, the smartphone is not only functionally more than one artifact—camera, phone, GPS, web browser, social media site, etc.—but it is also an assemblage of relations. It is, amongst many other things, a cultural status symbol, a way to reduce distance by creating a virtual space, and

an extension of my mind, used for storing memories and information externally. The framework I develop is a way to keep this broader perspective in mind when analyzing specific media and technological relations.

The framework builds upon the I-technology-world formula used to describe technological mediation, which is very effective in analysis on a microperceptual level. However, this formula does not portray the entirety of what is happening to the subject in the constituting moment. There are more than just technological relations that are happening, and postphenomenology acknowledges this by describing a culturally constructed body two (Ihde, 2002). However, postphenomenology has made little progress in creating a method or an instrument to easily implement the sociocultural component in a similar way to the I-technology-world formula that focuses on the microperceptual, let alone investigating the effect of other groupings of relations. The following framework serves this purpose by situating all of our mediating relations into groups for the goal of identification and discovery.

Framework Caveats

George Box (1979) offers a helpful perspective to keep in mind as I begin to describe the framework: 'All models are wrong but some models are helpful' (202). Representations are not reality, but they can help provide ways for us to interact and understand reality. The framework is useful as a situating anchor, helping to keep research tethered to the overarching perspective of what comprises the human subject. And yet, there is a tension between creating an inclusive framework and striving not to be reductive. Paul Cilliers (2005) says that the limitations of a framework make 'it possible to have knowledge (in finite time and space). At the same time, having limits means something is excluded, and we cannot predict the effects of that exclusion' (264). Keeping this in mind can help us pay attention to not only how we may be enabled, but also how we might be constrained when using this framework. For instance, by portraying the framework as inclusive, I create an expectation of completeness, which ultimately is impossible. To counteract this expectation, I include the group 'unknown/unknowable' (cf. Fig. 5.1). It is also possible that there is

a better way to organize or name the groups. The publication of this book captures the framework at a certain point in time, and it is quite likely that it will continue to change in the future.

An additional caveat is that the intrasubjective mediating framework (Fig. 5.1) *looks* anthropocentric. It has the mind/body at the center and is all about identifying the human subject's relations and even risks reflecting a mind-body split. However, this is absolutely not the intention behind the framework. Instead, it is a starting point to help enable us to understand our entangled interconnectedness and interrelatedness with the world. The framework demonstrates our embedded and embodied reality, our immanent beingness. We start from here in order to understand our interconnectedness and interrelatedness. This is not the view from above approach, nor a way to explore objective beingness. This is our subjectiveness with which we interrelate and are interconnected with the world. By using this framework as a starting point, we can increase our awareness of how we are constituted by the entirety of our relations. Only then will we be in a good place to critically judge the specific relations in our lives and decide how we may want to engage with them.

The Framework's Cartography

Before going into the details of each group, I explain the structural configuration of Figure 5.1. First, I identify the six groups: technological, sociocultural, mind, body, space, and time. This framework is dedicated to understanding the human subject, and places the mind and body in the middle, reflecting the central role they play. They are placed together with the co-constituting symbol to indicate the continual becoming of the human subject. Often these two groupings are considered the fundamental aspect of what we simply 'are'. The lower portion of the configuration captures time and space, which in physics are the first four dimensions of reality. This foundational pair is like the warp of a weaving, the structure upon which our reality—and the human subject itself—is constituted. The upper portion contains the technological and sociocultural relations that are human constructions.
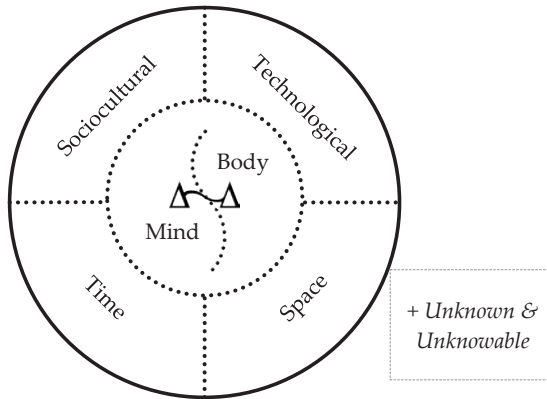
Fig. 5.1 *The Framework of Intrasubjective Mediating Relations.* Image by author (2021), CC BY 4.0.

The figure represents a way to look for and identify various groupings of relations, all of which contribute to constituting the subject. The boundaries between the groupings are porous, as the relations are entangled. These groupings simply gather relations with shared similarities. All relations within each group can interact directly or indirectly with relations from other groups. The subject is not so much constructed by these relations, but constituted through their totality in a dynamic manner; a constant *becoming*. These relations interrelate and influence each other, like waves that sometimes cancel each other and sometimes increase each other's effects. The focus for now is on the structure rather than the specific content, though I will attempt to explore examples within each group. I create a placeholder for 'unknown and unknowable' relations in order to build into the framework the idea that we do not, and cannot, know all of the relations that are affecting us. Later, in Chapter 6, I will leverage this 'simple' structure into a pragmatic instrument.

Technology and Sociocultural

I begin by grouping the relations that can arguably be called the most human-constructed: technological and sociocultural relations. I place them on the top of Fig. 5.1 since they are not too difficult to foreground. For all of the groups I frame them in the I-___-world formula in order to

emphasize how each grouping of relations mediates and co-constructs our selves and the world.

Technological Relations: I-Technology-World

The concept of technological mediation from postphenomenology—the I-technology-world relation—is the primary building block for the framework. In chapter three, I described in detail the aspects of the technological relations, including the four types of relations identified in postphenomenology. Rather than restate all of the details concerning technological relations—such as non-neutrality, multistability, and sedimentation—I will add to those ideas by describing a way to group technologies into three different genres: simple, complicated, and complex. Doing so can help us understand that all technologies are not the same, that the three groups have unique qualities that differentiate them and their broader effects on society and people.

Simple and complicated technologies have been a subject of Ursula Franklin (2004), though she describes them as holistic and prescriptive respectively. Franklin focuses on the cultural aspects of technology, describing technology as a system. She states that it 'entails far more than its individual material components. Technology involves organization, procedures, symbols, new words, equations, and, most of all, a mindset' (1). Franklin discusses technologies as a practice, focusing on *how* the technological process is being done more than *what* the process is actually creating.

Holistic technologies are often 'associated with the notion of craft. Artisans, be they potters, weavers, metal-smiths, or cooks, control the process of their own work from beginning to finish' (6). In these relations, the technology is fairly simple, and the skill in creating or producing or using the technology is mostly dependent upon the user. Franklin focuses closely on the interconnection between culture and technologies, how the craft process of creating technologies influences the type of culture that develops around it.

The second type of technology uses a prescriptive process, which Franklin (2004) describes as 'based on a quite different division of labour. Here, the making or doing of something is broken down into clearly identifiable steps' (7). There is a division of labor, where different

people take on specific and controlled roles. While the industrial revolution exemplifies this process, Franklin describes how the process was already being used in China in 1200 BC for casting bronze. The division of labor moves the overall control from the worker to the person in charge. The worker must follow a prescribed plan in order for the technological production to work properly. 'Prescriptive technologies constitute a major social invention. In political terms, prescriptive technologies are designs for compliance [...where] external control and internal compliance are seen as normal and necessary' (7–8).

While prescriptive technologies are exceedingly effective and efficient, they have a dramatic impact upon the culture, where 'we are ever more conditioned to accept orthodoxy as normal, and to accept that there is only one way of doing "it"' (8). This type of technology can be considered complicated, especially when compared with holistic craft technologies. This is where most contemporary ICTs can be found, though some aspects of ICTs are now moving into a third type: complex technologies.

Complex technologies can be understood as another paradigmatic shift. While prescriptive technologies move the control and responsibility from a single person in holistic technologies to an external control, complex technologies move much of that control more to the technology itself. These are technologies such as machine learning, where humans no longer control the specific inner workings of algorithms and predictability gives way to probability. The technology programs itself, and we can no longer pinpoint exactly how a specific output is reached.

Each of these subgroupings of technology brings different benefits and constraints to both individuals and cultures through their mediation. Their differences can be linked to different constituting effects on the human subject. All three retain the qualities of the technological relations discussed in Chapter 3: non-neutrality, multistability, and sedimentation. Having already covered these, I now move on to the second foregrounded group of relations: sociocultural.

Sociocultural Relations: I-Sociocultural-World

Some of the co-constituting sociocultural relations that mediate between our selves and the world have already been discussed:

postphenomenology's concept of body two; critical media literacy; and critical posthumanism. This group consists of the sociocultural relations that influence human subjects. Creating a place for these types of relations allows them to be analyzed and acknowledged as having an effect on how we are constituted moment by moment. This group is messy, wide-ranging, and very difficult to reign in to a neat tidy 'category'. However, I am not looking to categorize. My goal is to simply encourage investigation in order to reveal the sociocultural relations that have a constituting effect on us. Subgroups, such as power, gender, race, and language, that are a part of the sociocultural group tend to be entangled, and I do not believe it is necessary to fully separate them. I do not go into a great deal of specificity expanding on the many potential subgroups because I believe that the social science and cultural studies fields have already made a lot of progress in this regard. This grouping simply allows a place in the framework for these fields of study to be included. To exemplify this group briefly, I discuss postphenomenology's sociocultural concepts, as well as those from critical cultural studies.

Sociocultural Concepts in Postphenomenology. Postphenomenology has two concepts for cultural influences: macroperception and body two. However, it does not leverage these concepts into a method or instrument for exploring their influence on the human subject in a similar way to how it instrumentalizes technological relations through its I-technology-world formula. Additionally, the use of macroperception is focused on 'the ways in which cultures embed technologies' (Ihde, 1990: 124), but not on how cultures mediate human subjects microperceptively.

Microperception is focused on the embodied and embedded perspective of the human, which gives rise to the four types of I-technology-world relations in postphenomenology. However, as I have pointed out, Ihde (1990) states that there is no 'microperception (sensory-bodily) without its location within a field of macroperception and no macroperception without its microperceptual foci' (29). Ihde devotes a significant section of his *Lifeworld* book to the concept of macroperception (1990, cf. chapter 6), describing how technologies and our microperceptions are necessarily entangled within the broader sociocultural landscape. In practice, however, it is challenging to pragmatically incorporate the concept of macroperception into specific research on technologies. While microperception is tightly linked with

the I-technology-world mediation theory, macroperception and body two have more often been used as general concepts.

Robert Scharff (2006) criticizes Ihde's usual separation of micro and macroperception, saying, 'from what sort of perspective does he [Ihde] make the distinction between perceptual "embodiment" and cultural "context," put their discussions in separate chapters, and often discuss one without reference to the other?' (137). Lasse Blond and Kasper Schiølin (2018) 'suggest that postphenomenology has placed too much emphasis on technology, leaving the mediated human "I" and the world in the dark' (152). The framework developed here is an attempt to include how the sociocultural relations contribute to our own constitution.

Leveraging co-constituting sociocultural relations helps us to understand the transformative effects of culture on our microperceptions. This is a solution for the criticisms just discussed from Scharff and as well Blond and Schiølin. It is a way to bring body one (the microperceptual body) and body two (the culturally constructed body) from postphenomenology together and focus on how sociocultural relations constitute the human subject in a similar manner to technological relations. In Chapter 6 I will demonstrate the constituting effects of sociocultural relations that I experienced while taking a museum selfie. This sociocultural component is a strong influencing force on the individual, one that is sedimented over a lifetime. Developing this specific relation can help us better analyze its influence on the human subject. We can modify Ihde's (1990) original technological mediating formula in order to identify these constituting sociocultural relations: I-*sociocultural*-world. Like technological relations, sociocultural relations are co-constituting and multistable. How the sociocultural relations constitute the individual is not only unique to each individual, but is changeable (multistable) within the individual.

Sociocultural Concepts in Cultural Studies. Sociocultural elements influence people's practices and experiences. Tony Bennett (1998) offers elements of a definition for cultural studies, describing how there are diverse forms of power in relation to culture that should be examined, including gender, class, race, colonialism and imperialism. According to Bennett, 'The ambition of cultural studies is to develop ways of theorizing relations of culture and power that will prove capable of

being utilized by relevant social agents to bring about changes within the operation of those relations of culture and power' (28).

Building upon Bennett's (1998) work, Chris Barker and Emma Jane (2016) review some of the key concepts within cultural studies, creating a list that includes, in part, language, representation, materialism, political economy, power, subjectivity and identity, class, and race. Barker and Jane stress that cultural studies is non-reductionist, meaning situations cannot be reduced down to a single causal category or concept. Emily Grabham et al. (2009) describe one of the ways in which cultural studies leverages the concept of non-reductionism through intersectionality, which focuses on the intersection of several inequalities people experience 'that are rooted through one another, and which cannot be untangled to reveal a single cause' (1). Additionally, Leslie McCall (2009) points out that complexity, 'arises when the subject of analysis expands to include multiple dimensions of social life and categories of analysis' (49).

The framework I develop can lead to an increased awareness of this complexity and intersectionality of constituting relations. From the many potential subgroups available within sociocultural relations, I will briefly highlight normativity as an example of identifying sociocultural constituting relations. In Chapter 6, I use two other subgroups as examples in my exploration of analyzing my experience taking a museum selfie—language and politics.

Using normative relations, we can analyze how sociocultural relations influence by both enabling and constraining us. The concept of normativity can be understood by looking at two different scenarios where I would be different when taking museums selfies. In the first scenario, other people are also taking selfies and the museum itself encourages, or at least does not restrict, the taking of selfies with the museum objects. In this situation, I feel fairly comfortable taking a museum selfie. In the second scenario, nobody else is taking selfies. When I do try to take one, people in the area give me what I perceive to be unpleasant looks. Without explicitly asking if this was their intention, these reactions from the people around me are a way of communicating that taking selfies is not acceptable museum behavior. In this second scenario, I perceive my proximal social group as negatively judging me, and this has an inhibiting effect on my desire to take any further selfies.

These two scenarios demonstrate the importance of going beyond only the technological relation, as the constituting effects in the scenario have very little to do with any technological relation. I am being mediated and constituted culturally before I get to the point of the technological relation. Within these sociocultural relations, we can investigate the various ways that our culture mediates us as we relate with and through technology. This can include studying power dynamics, economics, language, ethics, and the normative values that arise when we look into sociocultural issues. I will now move on to explain Body and Mind relations.

Body and Mind

Both the body and mind can be considered core groupings of relations that comprise our human subjectivity. Often, these two groups are considered who or what we are, not necessarily as relations, but simply as 'us'. However, by considering the body and mind as part of a larger framework of constituting relations, we can analyze their relations using the mediating formula. The primary goal is not to answer the question of what the mind and body are specifically, but to create a structural approach that includes and organizes all the relations that constitute both body and mind in order to better understand the human becoming.

Body Relations: I-Body-World

We—each individual human subject—are greatly mediated by our bodies. The body provides the condition of possibility for relations by materially being-in-the-world. The materiality of our bodies—the chemistry and bodily systems—contributes to constituting our human becomingness. The physical bodily aspect—that many transhumanists would like to enhance and even one day overcome—is a major component of our subjectivity. Physical changes, such as taking psychological enhancing medication, sickness, hunger, or the loss or change of certain physical abilities, can dramatically change how we exist in our lifeworld.

To illustrate how my body can affect my relating to the world through technology, I use a simplified example of attempting to take a photograph of a bird out in nature. Under normal circumstances it is advantageous for a bird photographer to be patient and slow in their movements.

However, if my body desperately needs to empty its bladder, this biological imperative changes my ability to be patient, and my body's mediation begins to dominate and supersede the technological relation that I have with my camera and my attempt at taking a photograph. I am a much different photographer in this scenario than I am in a similar scenario where I do not need to use the bathroom.

The concept of being mediated by our bodies is not new. Mark Coeckelbergh (2019) writes 'we project ourselves towards things through the body and its movement. The moving body is a medium' (17). He continues by expanding postphenomenology's use of embodiment by stating that it 'is not just a particular human-technology relation (Ihde, 1990; Verbeek, 2005); it is the very way we exist in the world' (18). Lance Strate (2017) points out that even 'face-to-face communication is simply a differently mediated form of communication, and the body is the medium through which much of nonverbal communication takes place' (103). Strate continues discussing the mediation of the body by saying (2017: 102):

> The differences between the structure and functioning of human eyes and the ears are differences that make a difference […]. When we include all of the senses, not just vision, hearing, touch, smell and taste, but also the bodily senses, the kinetic, vestibular, and proprioceptive, it becomes clear that the nervous system, the brain, and the body in its entirety can be included under the category of media, characterized by specific structures that impose certain constraints and provide certain affordances.

Understanding the body as a medium—as something that we are mediated by—allows us to perceive it in a relational, co-constituting manner.

We are embodied beings, and our bodies make a difference in how we think and interact with the world. Bodies are foundational when it comes to many sociocultural relations such as race, gender, and sexuality. Our bodies also make a difference in how other people engage with us (Butler, 1993). Appearance, ability, and perceptual astuteness all have dramatic effects on a subject's engagement with the world. These aspects exemplify an entanglement of bodily and sociocultural relations.

Another entanglement is the body and mind groupings. While I identify these relations as two different groups, they are only separate

in order to identify and gather together specific relations. Strate (2017) countermands the traditional opposition of body and mind: 'The mind is not the body, but it emerges out of the body, is contained within the body, is dependent upon the body, but may also affect and alter the body' (114). Research and debate continue on the brain/mind/body entanglement. The physical brain has a tremendous influence on our minds, or the mind can be understood as emerging from the brain and body (Varela et al., 1992).

Mind Relations: I-Mind-World

The human subject is not an isolated, singular being, but always and already in relations, constantly being constituted by the shifting current state of all the relations that affect it. As with the sociocultural relation subgroups, the mind subgroups are not new but are groupings of already existing areas of study. My goal is not to bring new content to these groups and subgroups, but rather to include them in a cartography that can help guide our investigations into our own constituting relations, keeping a perspective of the whole subject as we do.

We 'cut' reality into a specific relation by doing and by deciding, using our mind's imagination, awareness, consciousness, and perception. The ability of our mind to mediate our experience with the lifeworld is exemplified by the well-known experiment of Daniel Simons and Christopher Chabris (1999), who conducted a study where people watched a video and were told to count how many times the team in white passed the basketball. As the team was passing around the ball, a woman in a dark gorilla suit walked between the players, turned to the camera, beat her chest, and then continued out of the screen. Only about 50% of the viewers who were concentrating on the number of passes noticed the gorilla. This demonstrates that even though our eyes receive information, our mind's attention and intention play a significant role in what we actually perceive.

Some of the subgroups of the mind that I note are imagination, awareness or consciousness, and identity. The concept of identity here, while heavily influenced by the sociocultural, focuses on our mind's role in our agency of creating our self-identity. Not all identity issues are contained within this subgroup, as the sociocultural also contains many of the identity relations. This will be further explained below (see the

section 'Awareness, Agency, and Identity'). Our mind helps us choose what we focus on, and is where we interpret what our bodily senses detect. It is the mind, through awareness, that helps us regain some of the agency lost to the various other relations and structures in our lives.

The following subcategories of the mind are an attempt to show some of the nuances of this aspect of the human subject. These subcategories are not separate from each other, and even their definitions remain contested. Several areas of study are still trying to figure out exactly what constitutes the mind (fields such as cognitive science, psychology, and the philosophy of mind). However, I use 'the mind' as a general grouping that contains mind-related relations, of which I will use the concepts of imagination, awareness/consciousness, and identity as subgroups.

Imagination and Technology. Imagination is one of the relational subgroups of the mind. It is a non-neutral relation, dynamic even within an individual, influencing more at certain times and less at other times. By formulating imagination as a relation, it is possible to use the concept to understand how humans are mediated by this element of our selves, allowing us to become more aware of the enabling and constraining effects on both the individual and broader sociological levels. To demonstrate, I will explore how the imagination affects our relations with technologies.

The concept of the multistability of technology discussed in Chapter 3 is only possible through our ability to imagine. It is our imagination that allows us to perceive technologies in multiple stable ways.[2] It is also our imagination that allows us—and hundreds of other species—to both identify and create technologies in the first place. Without being able to identify technology, we would not recognize any object in a tool-based or technological manner. Therefore, whoever (or whatever) does not have an ability to imagine technology will not have or be able to perceive technologies. Through imagination, a rock can be perceived as a hammer or a weapon, and a stick can extend the body to reach something. This first aspect of imagination is the condition for the possibility of perceiving an object in such a way as to accomplish a

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2   When Kyle Whyte (2015) theorizes that there are two conceptions of multistability, he names one imaginative multistability (and the other practical multistability).

desired task in a technological manner. It also enables the ability to perceive things in multistable ways.

The second aspect of imagination allows for the design and creation of new tools and technologies. Humans are not the only species that have this ability (cf. Beck, 1980). Vicki Bentley-Condit and E. O. Smith (2010) identify 284 species that have demonstrated a clear ability to *identify* tools; a portion of those species has also clearly demonstrated an ability to *create* tools. Benjamin Beck (1980) identifies four categories of how certain species actively create tools: detaching, subtracting, adding/combining, and reshaping. This goes beyond the mere identification of an object for tool use, as in picking up a stick.[3]

Imagination has its own enabling and constraining qualities. By conceiving of this concept as a relation, we can investigate what is enabled when we have a well-developed imagination. More importantly, we can consider what is constrained, since often what is constrained is backgrounded. Our imagination helps us create technological solutions. However, the danger here, as Heidegger points out (1977: 27–28) is that the enframing aspect of technology contributes to obscuring our ability for non-technological solutions to be revealed to us. Thus, our perception becomes obscured and we tend only to envision technological solutions rather than holding a space for non-technological solutions to be revealed.

For instance, in the contemporary Western world,[4] solutions for climate change are predominantly technology based (Preston, 2018). By being aware that we have a strong inclination to use our imagination for technological purposes, we can become aware of our predisposition and then actively search for possible non-technological solutions. Michel Puech (2016) points out that technology can nurture a command-and-control attitude, which is helpful for complicated and closed systems—systems that are engineerable—but not as useful for complex living systems. According to Peter Hershock (2003), 'The better we get at controlling our circumstances, the more we will find ourselves in circumstances open to and requiring control' (595). This can lead

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3   For examples of using postphenomenology to discuss animal tool use, see Ihde and Malafouris (2018) and Wellner (2017b).

4   This refers to the specific macroperception of a culture. Our cultures have an influence on how much we use our technological imagination (cf. Ihde, 1990).

to a runaway use of technology, which reflects what much of Western culture seems now to be experiencing.

Awareness, Agency, and Identity. In addition to imagination, other subgroups of the mind are awareness, agency, and identity—however, these subgroups do not easily stay separate from each other. As we investigate all of these various constituting relations, we might ask if we are simply a self-emergent system reacting to both external and internal relations? If we are on 'auto pilot', we are in an autopoietic mode, mindlessly self-becoming without agential intervention from the aware 'self'. This is where determinist and structuralist arguments seem to be reasonable.

However, through awareness and agency, a human subject does have some influence over their own constitution, but it requires an enactive approach, a participation of the aware self in how we choose to engage within an intricately complex dance. Our attention and intention towards any specific relation engages our agency; allowing us to influence the relation. What we do not pay attention to can become increasingly determining in our lives (i.e., influencing without our being aware). Our awareness acts as our own internal panopticon, a central aspect that can be directed towards any of our many relations, though it is impossible to be aware of all our relations at once.

Without the entanglement of agency and awareness, we would simply be determined systems, not (at least partially) self-governed through our agency, but rather constructed by an assemblage of constituting relations. Our lives are truly a dance of agency (Pickering, 1995, 2005), one where we can be continually led by the assemblages of our relations, or choose to participate in the dance through our own agency. Barad (2007) describes agency as 'a matter of intra-acting; it is an enactment, not something that someone or something has' (178).

Another subgroup of the mind is identity, which, as mentioned, is heavily influenced by culture. However, the basic concept of having an identity—a 'self' and a 'me'— is the part of the subject that is referred to here, the ability to identify as a subject. However, as Stuart Hall (2013) notes, 'Though they seem to invoke an origin in a historical past with which they continue to correspond, actually identities are about questions of using the resources of history, language and culture in the

process of becoming rather than being' (4). In other words, identity is comprised of an aspect of the mind that is deeply entangled with culture.

The relational group 'mind' can help us focus on specific constituting relations of the mind and investigate how they enable and constrain us through the I-mind-world mediation formula. For instance, I can look into how my relational identities—as a practicing naturalist and as a nature photographer—can compete with each other. As a naturalist I might not want to disturb the behavior of the birds I am trying to photograph, especially if it is mating season and the bird in front of me is an endangered species. However, as a nature photographer my photos can help bring awareness to protecting this endangered species. These senses of identity compete with each other, and my awareness is split between them, attempting to find an acceptable compromise. Identifying the various relations of the mind and paying attention to how we are constituted by them increases our agency and ability to interact in a more informed way with our lifeworlds.

Space and Time

Having now described the more human-created relations of sociocultural and technological relations, as well as the core relations of mind and body, I now come to the more infrastructural relations of space and time. In physics these are understood as the first four dimension of reality. Space and time are the ultimate background, the tapestry upon which our universe exists. They are contextualizing relations. As John Urry (2005a) suggest, they are '"internal" to the processes by which the physical and social worlds themselves operate, helping to constitute their powers' (4). Both space and time can be considered mediums through which we relate, and I investigate how we are constituted through those relations.

In Chapter 3 I discuss how Harold Innis (2008) studies the space-time bias of mediums of communication. Shaun Moores (2005) also develops an entire book on media studies around time and space, claiming 'it is necessary to appreciate the complex ways in which media of communication are bound up with wider institutional, technological and political processes in the modern world' (3). He advocates for understanding 'media as operating in the wider temporal and spatial arrangements of society, but also as contributing, reciprocally, to the creation, maintenance or transformation of social time and space' (4).

Anthony Giddens (1979) argues the need to realize 'the time-space relations inherent in the constitution of all social interaction' (3). In this chapter, I am also advocating that space and time can and should be understood as relations, which impact the human subject's continual constitution. By naming them, we can analyze the specificity of those relations and bring to the foreground how they contribute to our own constitution in our everyday[5] lives.

Space Relations: I-Space-World

We can think of space as a medium within which we exist and to which we relate. Space defines the physical location, the embeddedness and situatedness of our location in the world. This section investigates the proximal effect of our physical surroundings. Space includes the natural world, as well as the human-made world. Space includes the Earth, air, clouds, atmosphere, and the vastness of outer space. Space is a medium and contributes to our own constitution through our relations with it. John Peters (2015) describes how these elements can be understood as mediums, affecting the species that exist within them. However, space is resistant to being understood singularly. It is easily entangled with other groups of relations such as technology and culture.

Using space as a relation tethers us to the physical world. While our minds and imaginations can get overly immersed in exploring the intricacies of sociocultural relations of power or issues surrounding representation and misrepresentation through the lens of social justice, it is the materiality and tangibility of our immediate surrounding that helps ground us in the here and now. The effects of the different mediums of space are clearly evident in communications. For instance, communicating underwater is vastly different than communicating through air (cf. Peters, 2015), which is vastly different than communication in outer space, in the absence of air. All of these particular elemental mediums are gathered in the general grouping of 'space'. This creates a way to locate and bring spatial relations to the

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5   Alfred Schütz (cf.; Schütz & Luckmann, 1973) uses spatial arrangements as the foundation to his structure of everyday life, followed by temporal and then social arrangements. See also Laurence Claeys (2007, chapter 6) for a helpful schematic and description of Schütz's conceptual framework.

foreground in order to analyze and recognize their influence on our own constitutionality.

Spatial Entanglements with Other Groups. Rather than discussing subgroups of space, I will present several ways that space can combine with some of the other relational groups. The first is the combination of space and mind, where I investigate the spatial effects on perspective. Space can have a profound effect on a person's mental state. An example of this is what Frank White (2014: 2) refers to as the Overview Effect:

> The Overview Effect is a cognitive shift in awareness reported by some astronauts and cosmonauts during spaceflight, often while viewing the Earth from orbit, in transit between the Earth and the moon, or from the lunar surface. It refers to the experience of seeing firsthand the reality that the Earth is in space, a tiny, fragile ball of life, 'hanging in the void', shielded and nourished by a paper-thin atmosphere. The experience often transforms astronauts' perspective on the planet and humanity's place in the universe. Some common aspects of it are a feeling of awe for the planet, a profound understanding of the interconnection of all life, and a renewed sense of responsibility for taking care of the environment.

White also posits, 'mental processes and views of life cannot be separated from physical location. Our "worldview" as a conceptual framework depends quite literally on our view of the world from a physical place in the universe' (1). Space and mind are thus entangled. What is physically surrounding us can profoundly affect our mind and our perception of the world.[6]

Media and technology have historically had a profound effect on our understanding of space. Technology has a way of reducing space. For instance, it would take a moderately healthy person 2 ½ days to cover the space between Brussels and Paris by walking, while the train can travel the distance between the two cities in about 1 ½ hours, effectively shrinking our perception of the space since it takes less time to travel between them. Technology has also created virtual space, shaking up the idea of space. Current ICTs are changing aspects of proximity by allowing a virtual proximity. For the most part, the most common virtual space uses two of the five traditional senses (vision and hearing). Video conferencing and video calls are quite common.

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6   For another excellent study on the impact of the visual image of Earth from space, see Sheila Jasanoff (2001).

However, though our other senses of smell, touch, and taste have not entered mainstream usage, there are development attempts underway (cf. Harley et al., 2018).

Being limited to the two senses, virtual proximity is not as engaging as actual proximity, where all of our senses can participate. However, virtual space still dramatically influences our contemporary world, and there are many authors who have investigated how this impacts our lifeworld (see Adams & Thompson, 2016; Lewis, 2020; Meyrowitz, 1985; Rauch, 2018; Turkle, 2011; Van Dijck, 2013; Wellner, 2016). However, virtual proximity tends to disembody a subject, which 'messes with *whereness.* In cyberspace you are everywhere and somewhere and nowhere, but almost never *here* in the positivist sense' (Stone, 1994: 180, italics in original). Virtual space demonstrates how two of the relational groups can combine together into a seemingly singular relation.

While space comprises the human-made (technological) world, it also comprises the natural world. However, the concept of nature is a social construction (Cronon, 1995). It is not possible to experience nature outside of the socioculturally sedimented values and experiences that have built up in our lifetimes. This does not mean that there is not a 'natural world', we simply experience this natural world through a sociocultural filter rather than directly. That said, the natural world does mediate and contribute to our constitution. For instance, researchers are exploring the benefits of spending time in nature and how it can increase both our physical and mental health (Faber Taylor & Kuo, 2006; Louv, 2008; Vitalia, 2013).

Spatial and bodily relations are also entangled. We are always somewhere, embedded and embodied physically. Coeckelbergh (2019) draws attention toward how the body moves through space, pointing out that the embodied relation within postphenomenology 'does not move enough' (19). A moving body is necessarily moving through both space and time. And, Maurice Merleau-Ponty (2002) explores how a 'bodily space can be differentiated from an external space' (115).

Space is also entangled with sociocultural relations. The idea of personal space—the distance between me and another person in a crowded room—can vary by culture. I am affected by how close someone is to me, not only because of the amount of personal space I prefer, but also because of my sociocultural upbringing. Additionally, Erving

Goffman (1956) explores the interaction between the performance of self and space, looking into how these issues of public and private spaces affect our behavior. These are all examples of the entanglement of spatial and sociocultural relations.

Recent Foregrounding of Space Relations. I am writing this during the global pandemic caused by COVID-19, which has caused spatial relations between people to become globally foregrounded. The main response to halt the spread of the virus has been through social distancing: working from home, massively reducing global travel, staying around two meters away from other people, and shutting many national borders. All of these measures involve shifting the use of space in order to stop the transmission of the virus until a vaccine (a technological response) can be first created and then disseminated throughout the global population. This is one of the rare times that proximity moves from the background to the foreground. It is likely that this pandemic has shifted nearly every person's personal awareness and experience of space on the planet.

Time Relations: I-Time-World

Time is the final group of relations. Time brings unique characteristics and can be challenging to pin down and define.[7] We are forever in the present, but both the past and future have mediating affects. Up until now I have discussed the groups of relations as they primarily mediate us in the present moment. I-technology-world, I-sociocultural-world, I-mind-world, I-body-world, and I-space-world all represent mediations in the moment of being mediated. But the present moment is affected by both the past and the future. As Barad (2007: 181) describes:

> The past matters and so does the future, but the past is never left behind, never finished once and for all, and the future is not what will come to be in an unfolding of the present moment; rather the past and the future are enfolded participants in matter's iterative becoming.

In this section I investigate time as a relation in order to understand how the past and future transform the way we presently perceive the world.

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7   See Canales (2016) for a discussion on the debate between Einstein and Bergson concerning time.

Time is the relation that brings movement to life. Time is a flow—a process or an action—that affords the becomingness of humans. This flow is one directional. Complexity theory views time as being irreversible,[8] an arrow of time. As we are transformed by our experiences, we cannot go back to the way we were. We are always in the present, but we are simultaneously mediated by both past and future. Graham Harman (2007) suggests that for Heidegger, 'time is the ultimate concealed layer of everything' (48). In *Being and Time,* Heidegger (2010) counters the concept of presence,[9] which is predicated on the Aristotelian concept of time and which situates the present as separate from the historical past and the future that has not yet come to pass (§6 and §26). Instead, Heidegger believes that a more authentic understanding of time is as a unity of past, present, and future, an 'ecstatic openness' (Sheehan 2014: 266).

My sense of time, which is influenced by sociocultural relations, influences my interaction with the world in that moment. For instance, I am late leaving for work in the morning, causing me to rush and do everything quickly. I am affected by both the past (maybe I have been late already twice this week and my boss has let her displeasure known) and the future (I am imagining what will happen if I arrive late again). These are direct relations that I am experiencing with the past-present-future duration of time.

Relating to the Future through Potentiality. Asle Kiran's (2012) investigates one type of direct relation with a future orientation through the concept of potentiality, which he develops with regard to technological relations. Kiran describes how the future potential of technologies mediates our present experiences, stating that we are 'directed towards the future, and any kind of planning [...is] performed because we presuppose that we have certain possibilities to do something with our lives' (88). He looks beyond 'technologies in-use' (78) and broadens the mediating influence of technology, stating: 'technological shaping of the lifeworld happens in terms of possible technical mediations, not just actual technical mediations' (79). This potentiality adds a way of leveraging the future as a relation.

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8   This concept of time rejects the part of Newtonian mechanics that views time as being reversible.

9   See also Derrida (1982).

Relating to the Past through Sedimentation. Another way of describing relations with time relates less directly *to* time and instead relates more *because of* time. This aspect expands upon the concept of sedimentation, which is the idea that our past experiences with a phenomenon influence each subsequent experience of the same phenomenon (Husserl, 1973; Merleau-Ponty, 2002). For example, our experiences with technologies become sedimented within us the more we use them, eventually causing the object to recede into the background of our attention. Sedimentation is often described by focusing on the use of actual technologies, such as using a hammer, driving a car, or a blind person using a cane to detect things while they are walking. However, sedimentation does not have to be an experience with the actual technology. As soon as awareness of a technology enters a person's lifeworld, sedimentation begins to be developed within the subject. For instance, consumer marketing advertises the latest technological gadget with the hope of transforming people into wanting to buy and incorporate the object into their lives. If the advertising is successful, the consumer will imagine owning the new technological device, already incorporating the idea of the device into their lifeworld.

We interact with the world in the present, but without past and future there would only be the here-and-now relations mediating the subject and world. Even given this predilection, this is not how our lifeworld works. In any present moment, we are connected with both our history and our future. While in some ways the past and future might not exist in the present, they do exist through their connection within our selves and their transformational abilities. Or, as Braidotti (2017) states, 'To do justice to the complexity of our times, we need to think of the posthuman present as *both* the record of what *we are ceasing to be* (the actual) and the seed of *what we are in the process of becoming* (the virtual)' (10). This entanglement of past and future acting upon someone in the present is more thoroughly described by intrasubjective mediation.

Adding Intrasubjective Mediation to the Framework

Having described the grouped relations within the framework, I now bring in the concept of intrasubjective mediation. One way to understand intrasubjective mediation (ISM) is by using postphenomenology's

concept of the embodied relation. This is because intrasubjective mediation reflects the non-neutrality of the transformations from our relations that have taken place within the subject, which thus mediate our perceptions of the world as we engage with the world *through* them. Portraying the intrasubjective mediating relation using the embodied relation formula looks like the following:

$$(I\text{-}ISM) \rightarrow \text{world}$$

We perceive through our relational transformations as a type of embodied relation. We are mediated through our sedimented transformations and perceive the world (and our current relations) differently because of this perception. Therefore, looking specifically at technological mediation discussed in Chapter 3, the equation can be updated from I-technology-world to: (I-ISM)-technology-world. However, intrasubjective mediation represents the transformations from all of the relations identified by the framework, not just the technological. Figure 5.2 reflects a way to visualize the expanded technological mediation formula that includes intrasubjective mediation.
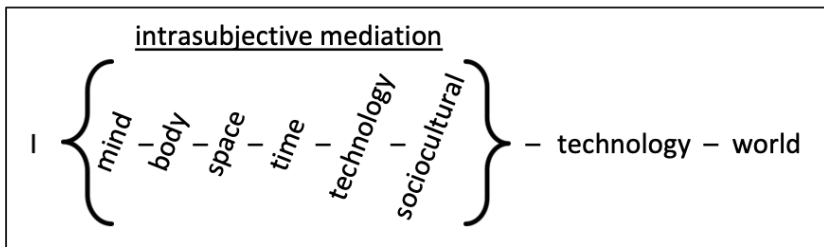
Fig. 5.2 *The Formula for Intrasubjective Mediation with Technology.* Image by author (2019), CC BY 4.0.

Intrasubjective mediation does not discount or ignore all of the other mediating relations, but rather is an additional mediating layer to whatever relations we are in at the present moment. A technological example of this is when I use a camera to take nature photographs. The more I use the camera, the more the camera becomes transparent, receding into the background as my sedimentation grows with use. The more that I use the camera, the more my relation with the camera influences my own constitution, transforming my perception of, and

relation with, the world. However, even when I am out in nature without my camera, I notice that I perceive and frame nature through the filter of what would make a good photograph. This can be thought of as a 'technological gaze' (Lewis, 2020), which both enables me to be more aware of my surroundings—specifically looking for owls, raptors, and other wildlife, as well as noticing the light and interplay of shadows—but it also limits how I perceive the natural world around me. I end up looking *for* things, not just looking. I do not experience the natural world around me immediately; rather, I experience the natural world as intrasubjectively mediated through a residual aspect of the photograph based upon my previous experiences.

Intrasubjective Mediation versus 'I'

Intrasubjective mediation acknowledges how all of our relations both constitute us in the moment and continue to transform us, continuously changing how we perceive and engage with the world. These transformations are not separate from the subject; they *are* the subject. They are the multiplicity of the human becoming. All relations are mediated through intrasubjective mediation. This enables us to better understand the human subject as an assemblage of the transformations that have occurred through their relational experiences, as well as all of the relations they are experiencing in the present moment. This begs the question, Are humans anything besides intrasubjective mediation? What is the 'I' that is still preceding the intrasubjective mediation in the above formula?

My belief is that the 'I' includes (and is mediated by) the constituting relations in the person's life and all the relations that the person has experienced, as well as the potentiality that the person can imagine. The consciousness that is 'I' is still part of the mind, which is a part of the mediating whole. Therefore, instead of trying to reductively locate some essential aspect of the subject that we can identify, we can move in the opposite direction and open the idea of the subject as inclusive of all of our relations, current and past.[10] Human subjects are greater and more connected than the idea of the standalone human. We can therefore

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10   The future is also included in the present through the concept of potentiality discussed previously.

unite the 'I' with intrasubjective mediation, referring to our selves as intrasubjectively mediated subjects.

One more step in visually demonstrating a comprehensive framework is to take Figure 5.2 and add the other groups of relations to the technological. This is shown in Figure 5.3, which includes all six relational groups plus the concept of intrasubjective mediation. There is no relation of the human subject that is not intended to be a part of the groupings of relations in Figure 5.3, though there might be relations that I have unintentionally missed (or that have not yet been discovered). It is also important to keep in mind that there are unknown and unknowable relations that also affect us. For example, there could be an unknown toxin near the physical location of your home, which detrimentally affects both your body and mind. While this is potentially knowable if identified, you could live with it for many years without ever knowing. There are also the theoretically unknown and unknowable relations.
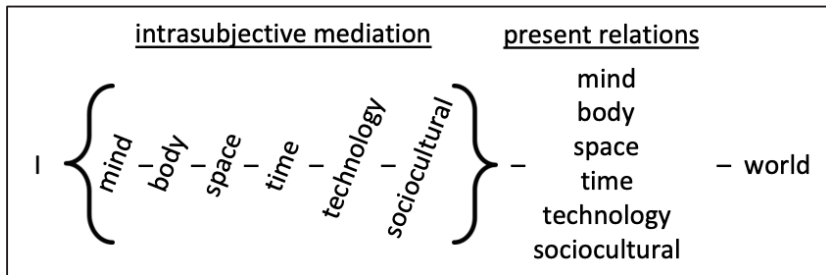
Fig. 5.3 *The Formula for an Inclusive Intrasubjective Mediation.* Image by author (2019), CC BY 4.0.

The intrasubjective mediating framework helps demonstrate that these groups of relations mediate our perception and engagement with the world, moving us beyond focusing on a single group of relations in isolation. By understanding intrasubjective mediation as an embodied relation through which we relate to the world, we can visually demonstrate how intrasubjective mediation mediates the relations we have in our lifeworld.

Even if our focus is on the effects of any one particular group of relations, the framework reminds us that those relations are situated and entangled with multiple other groups of concurrent relations. No one group is privileged in its effect on our own becoming at any one

moment in time. The framework describes both the present constituting relations, as well as the aspect of how the transformations from those relations continue to mediate all of our relations as we move through time.

However, Figure 5.3 is clearly still built upon postphenomenology's I-technology-world formula. While I have expanded the first two parts of the formula, the 'world' has not received much attention by me,[11] or, indeed, by most postphenomenologists. I believe the formula is helpful in analyzing specific relations and how they mediate and constitute us. However, this process is a teasing apart of reality, or the world, as a whole. By keeping a larger perspective, we can approach understanding our own worlds as being made up of all of our relations and interrelations, which I will describe in more detail in the next chapter. This leaves less reason to retain a world 'placeholder' after the list of relations. And yet dropping it removes it as an effective formula for understanding our constitution through our interrelations. Therefore, the next step is integrating the framework into a complex interrelational system of the human becoming.

Intrasubjective Mediation: A Dance of Complexity

> To understand just one life, you have to swallow the world. (Rushdie, 2006: 145)

The final part of the human becoming process involves the system of our complex interrelationality. It is this interrelational complexity that gives the sense that in order to understand anything, you must understand everything (see Rushdie quote above). Up until now I have looked at either singular or a combination of mediating relations, showing how the subject is transformed by any of the various groups of relations, as well as intrasubjective mediation. However, human subjects cannot be boiled down to a linear causal algorithm, where all that is needed is to add up the various enabling and constraining relations and end up with a predictive model for the human becoming. In order to understand 'who and what we are actually in the process of becoming' (Braidotti, 2013: 12), we need to understand *how* we are becoming. The relational

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11   I thank Alberto Romele for first pointing this out to me.

transformations described by intrasubjective mediation are not discrete transformations that can be added together to create a composite of the human subject. Instead, these transformations are entangled and interrelational, producing an emergent human becoming through a complex process.

The Complexity of Interrelating Relations

We are not simply relational or even multi-relational. Rather, we are a system of complex interrelationality, continually being transformed. Each of our relations is open to being influenced (enabled or constrained) by each of our other relations. These interrelations co-constitute each other. Mapping this complex interrelationality helps us to better understand and situate any one constituting relation within this broader, emergent system. This is an effort to re-envision the subject through a cartography-in-progress and should not be thought of as dogmatic. On the contrary, it is a partially new topic introduced into a conversation that has been going on for centuries, modifying the question, 'who are we?' to 'what are we and how are we becoming?' Complexity theory provides three insights: 1) we are open systems; 2) we are in a state of non-linear equilibrium; and 3) we are emergent.

Complex systems are open systems. Being complex, humans are open systems as well. We bring in matter and energy and also produce waste that leaves our 'system' (Capra, 2005). We are connected with, and constituted by, all of the relations in our lives, making us interconnected beings with no hard boundaries of separation. We are not singularly complex, but are assemblages of nested complex systems (Capra, 1996), from our biological bodies to our complex extended minds.

Complexity theory highlights the near impossibility of predicting how any particular relation will influence the overall constitution of a subject. This is because we are in a state of non-linear equilibrium. While we are in a continual state of being constituted, we are often in a generally stable, if non-linear, equilibrium. However, occasionally we experience major life-changing moments (called bifurcations in complexity theory), which can be caused by a very small nudge from any one of our multitude of relations. This continually changing state can be understood through probabilities but eludes any predictability.

Because of the interrelationality between all the groups of relations, any relation can affect any other relation. Therefore, rather than perceiving relations as summative (adding up all relations to get a final sum of influence), they should be thought of as being interrelated in a complex evolving web.

The final concept that aids our understanding of our selves as systems is the idea of emergence. In complexity theory, this is generally referred to as autopoiesis. However, as mentioned, Haraway (2016) has a more succinct way of referring to this process: *sympoiesis*. This term means making-with rather than the self-making concept of autopoiesis. This way of referring to the process of emergence moves away from the idea of the autonomous self and more accurately reflects how we are mutually being constituted with everything around us. This complex entanglement increases our resilience as no one relation determines us. Each relation's effect on us is enabled and constrained by many of our other relations, all happening in a sympoietic moment that emerges through time. While I began this chapter by introducing the groups of relations separately, the groupings are not meant to keep relations apart, but rather to allow the analysis of similarities and the ability to identify aspects of what contributes to our constitution.

Agency, Education, and Literacy: Understanding Degrees of Influence

Relating back to media literacy, how can the framework enhance our awareness concerning the effects of our media relations? Increasing our awareness allows us greater agency, without which we risk living as beings determined by the technologies in our lives (Puech, 2016: 173). One goal in philosophy of technology is in enhancing our awareness of the effects of technology. As Yoni Van Den Eede (2016) argues, 'From McLuhan to Heidegger to Ihde to Latour to Feenberg, […] a thread can be said to run, uniting them in one great perceptual project: the spotting of blind spots, and the accompanying attempt of remedying them' (108). In order to become media-literate, we need to better understand our own complex interrelational becoming, which allows us to situate how our media relations interrelate with our other relations. In other words, this framework provides a cartography that enables us to become

self-literate, becoming aware of all of our interrelationality, which then allows us to become more media literate.

What contributes to the amount of influence a particular relation has at any particular moment? While we are being constituted through a complex ecosystem of relations, all influencing each other in small and large ways, they also can be affected by our agency and our awareness, giving us the ability to—at least partially—manipulate the process of our own becoming. We are dynamic assemblages of relations, most of which we pay little or no attention to. However, many of these relations are available to us to become aware of, which allows us the opportunity to have some influence upon them.

Some relations in our lives have a great impact upon us, while others do not. This is often identified only in hindsight, though we cannot be certain that we ever truly know the full extent of the impact of any relation. For example, a person's ability to earn money derives from many possible influences: the situation they were born into, their upbringing, their immediate location, their level of education, their culture, race, gender, or simply being in the right place at the right time. Some relations are more difficult to change by a subject's agency. This does not mean, however, that a subject is completely determined. The subject has agency in how they interpret or understand this less flexible relation. This is Foucault's (Foucault et al., 1987) point about awareness of power: we cannot do much to change the fact that there is a power relation, but we can change how we perceive and relate to the power relation.

Ideally, this new framework will help us better understand and utilize our own agency, similar to the later Foucault. Tamar Sharon (2014: 168) summarizes some of Foucault's ideas:

> Rather, freedom here is the possibility of modifying the impact of power on one's subjectivity, it is a practice of actively engaging with one's relationship to power and so a practice of subject constitution. Freedom is not about escaping structures of power but of interacting with them. Because there is no authentic or natural self that can be liberated, freedom lies in the dynamic, aesthetic and experimental self-creation undertaken in the practices of the self.

Sharon's take on Foucault situates the subject between being completely independent and autonomous in relation to the world and being

completely determined by the structures of power that make up that world. This is a very constructive starting point from which to think about how humans can relate to the technological—as well as other— relations that constitute them. This interrelating framework enables us to create a perspective in order to better understand the relations of influence. I prefer to use 'relations of influence' rather than 'relations of power', as I feel it is a more inclusive and descriptive way to portray these relations and their effects on us. These relations of influence are not just between the thing of influence and the subject, there are also interactions between the various relations.

For example, in my role as a nature photographer I can look for the interrelations that affect my photography: the physical place where I am (the landscape, the weather, the lighting, etc.), as well as my sense of identity (both mind-related and sociocultural). Also, my body (hunger level, brain chemistry, physical ability to manipulate the camera technology, etc.), and my historical experience with both the technology and the place (have I been there before, do I know where I am going or what I am trying to find) all influence me. Additionally, the future intention of what I am trying to accomplish—my imagined potentiality for the final image and my plans for that image, such as selling it, sharing it with my social network, entering it for a competition, etc.—all influence the photograph that I take. This is a very brief list of some of the relations that comprise the interrelationality of my experience taking nature photographs. In the next chapter I will use the framework to analyze the relations and interrelations that I experienced in the moment of taking a museum selfie, developing an instrument in the process that can be generalized and used for media literacy.

Concluding Thoughts

Leveraging the concept of technological mediation and turning the concept into a more inclusive and situating framework helps us to circumvent our attachment to a specific group of relations, such as focusing solely on the technological or the sociocultural. The intrasubjective mediating framework helps deterritorialize the concept of the individual, reterritorializing it into an interrelated human

becoming. In summary, there are three parts that make up the systemic intrasubjective mediating framework:

1. The transformations that occur from the relations in our lives are not neutral, and they continue to mediate us as we perceive and engage with the world through them. This is intrasubjective mediation.

2. All of the relations in our lives can be gathered into six groups: technology, sociocultural, mind, body, space, and time.

3. Human subjects can be understood as open and complex systems whose constituting relations are constantly interrelating in non-linear and emergent ways.

There can be a tendency to view how a specific technology influences us in a singular manner. Even with the concept of multistability, we may consider that only one variant is acting upon us at a time, co-constituting our selves and our lifeworlds. This framework enables us to reflexively comprehend specific effects that technologies have, allowing us to more intentionally decide which technologies we invite into our lives and how we use them. We are an inter- and intra-connected complex assemblage moving through space and time, constantly becoming. This framework helps to broaden our understanding that there is a complexity of entangled relations, which constitute us. We experience our being-in-the world as a complex, entangled experience of relations, all influencing us whether we pay attention to them or not. Foregrounded or backgrounded, a multitude of relations exist, and it is impossible to disentangle them.

This new framework enables the ability to identify the multiplicity of relations that all contribute to our human experience of becoming. We can think of the six groups as different mediums through which we become. The framework can help us better understand the constituting factors that contribute to our human becoming across cultures and across time, aiding research in the social sciences by providing a situating cartography. The framework helps researchers move beyond a deterministic view, where subjectivity is determined by a single group or subgroup (be it power, economy, class, gender, nature, nurture, etc.)

and beyond an 'agency' view, where the subject has full agency and other things like technology and culture are simply neutral.

Variations on Relations

While the framework includes what I consider to be an inclusive and comprehensive organization of the differing relations that affect us, I leave room for the unknown and even unknowable (cf. Fig. 5.1). One of the main goals of postphenomenology and media ecology, as well as several media literacy approaches, is to help us become aware of the 'ground' in the figure/ground concept. In other words, to help us to perceive things that influence us but of which we are typically unaware. Adding a placeholder for the unknown/unknowable keeps our awareness open to the limits of what we know and helps compel us to continue seeking new influencing relations.

Additionally, I have been discussing the relations in our lives through a positive lens, meaning relations that we are engaged with. However, not having a relation is, in effect, a relation as well. Judith Butler (1993) critiques Foucault's notions of discourse and materiality by saying they 'fail to account for not only what is excluded from the economies of discursive intelligibility that he describes, but what has to be excluded for those economies to function as self-sustaining systems' (35). In other words, both our relations and our lack of relations—relations we may not have access to for a myriad of reasons—constitute us. We therefore can consider the absence of a relation as still a relation.

What does it mean to be 'human' in this age of ubiquitous digital communication? How can we contextualize and situate both the benefits and drawbacks of the transformative effects that ICTs have on humans as subjects? Our communication mediums are transforming more quickly than we as subjects and societies can completely adjust to. These changes transform us in important ways that need to be evaluated alongside of the changing media technologies. In other words, to fully become media literate we need an ability to be self-literate—to understand that a change in media technology causes a transformation in both our selves and our lifeworlds. By better understanding how we are interrelatedly constituted, we will be better able to judge new media and be better equipped to decide if and how we invite them into our lives.

This is the agency that media literacy and this intrasubjective mediating framework can enhance. However, how exactly can media literacy leverage this framework? An instrument is needed to assist with the pragmatic use of the framework in order to better situate the effects of media technologies. In order to develop such an instrument, in Chapter 6 I return to my experience taking a museum selfie and use it to engage with the framework.

Chapter Summary

6. Developing an Instrument to Leverage the Framework

With the intrasubjective mediating framework now explained, the next step is to develop it into a practical instrument that can be used to facilitate critical reflection and engagement with media. In order to do so, I return to a museum selfie that I took while conducting a postphenomenological study (Lewis, 2017). It was this experience that inspired my desire to find a more inclusive framework beyond postphenomenology's focus on technological relations. I begin this chapter with a description of this event and then investigate the museum selfie through the development of an instrument that helps identify the broad range of influencing relations that contributed to both my own and the selfie's constitution. I then generalize the instrument into an exercise[1] that can be used to teach media literacy.

It was January 2017, and I was at the Art and History Museum[2] in Brussels to experience the fourth annual Museum Selfie Day, an event started by London blogger and museum advocate, Mar Dixon.[3] This event occurs annually around the third week in January. Museum goers are encouraged to upload their selfies to Twitter, Instagram, or other social media sites and tag the images with the hashtags #MuseumSelfie

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1 You may download the exercise by going to the 'Additional Resources' tab at https://doi.org/10.11647/OBP.0253#resources

2 The museum was called the Cinquantenaire Museum when I visited but is now called the Art and History Museum.

3 Dixon identifies as a digital and social innovator. She has created and runs other social media campaigns, such as Ask a Curator Day and Love Theatre Day. She currently resides in the U.S.

or #MuseumSelfieDay. From Mar Dixon's blog she describes it as '*a FUN DAY to encourage people to visit museums and participate a bit with art or collections*'.[4] This event now spans the globe, taking place mostly on Instagram and Twitter. There are increasing numbers of museums that participate. In January, 2019, Turkey made it legal for people to take museum selfies in more than 300 sites because of the museum selfie day.

I became involved with museum selfie day because I had been studying the effects of technology on museum visitor's experiences, specifically using a philosophical style of analysis within philosophy of technology called postphenomenology, which emphasizes how to (pragmatically) understand the way technologies co-constitute both our selves and our world (cf. Chapter 3). I decided to participate in the event in order to experience how the selfie would contribute to both my constitution as well as the museum's. While postphenomenology helped me understand the technological relations of my museum selfie experience, I also felt that there was something missing. The technological mediation of taking and viewing selfies seemed to be only one aspect of a larger complexity of mediating relations. I felt that I needed a more comprehensive framework to fully understand what I was experiencing, both technologically and otherwise, as I took my museum selfies. This led to the framework I presented in the previous chapter.

Creating the Instrument

One challenge with theoretical ideas, even ones that are described as 'frameworks', is the ability to implement them in a practical and usable manner.[5] In this chapter I translate the framework into a concrete instrument by using a museum selfie as a way to situate media literacy. Specifically, I use the general groupings from the framework in order to identify the specific relations and their effects that existed when I created a museum selfie. This is done through a two-stage spreadsheet. The first stage enables me to identify the multiple relations in each group or subgroup that were involved when taking the museum selfie.

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4   http://mardixon.com/
5   Postphenomenology has a history of creating philosophical case studies in order to ground their investigations in the 'real world'. This pragmatism has inspired my desire to create a practical instrument.

The second stage helps me to identify what I perceive to be the amount that each of the identified relations was influenced by the other groups and subgroups. By doing this, the phenomenon of the museum selfie in Figure 6.1 is uncovered to reveal the complex interrelationality that occurred—as analyzed autoethnographically—at a particular moment in time. Even though the instrument uses numbers that can have a semblance of objectivity, it is important to understand that these numbers all reflect a subjective analysis.
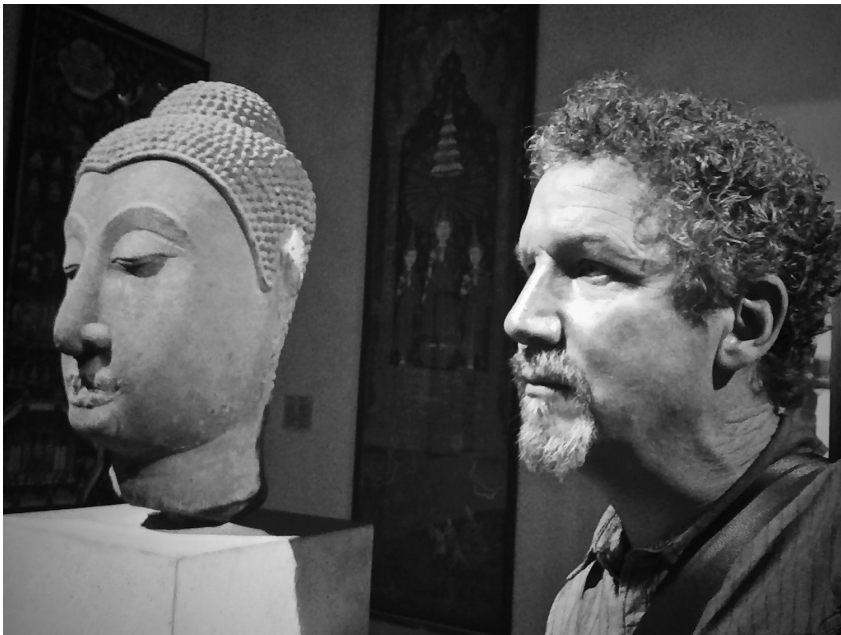
Fig. 6.1 *Meditating on Mediation.* Author with *Head of a Buddha,* from Ayutthaya, Thailand, seventeenth century. Art and History Museum, Brussels. Image by author (2017), CC BY-NC 4.0.

Identifying the Multiplicity of Relations

Rather than primarily focusing on the technological thing (the selfie) or the constitution of the subject (myself), the framework stresses how the relations and interrelations constitute both. I refer to this phenomenon as the selfie-subject constitution, what Karen Barad (2007) identifies as intra-action and postphenomenology calls co-constitution. While there

can be a tendency to view the subject-selfie phenomenon in a singular or gestalt manner, the framework affords the ability to tease apart (but not separate) the phenomenon in order to reveal the complex interrelations. To begin with, every relation is a multi-relation. There is no 'technological relation' without a multiplicity of sociocultural, bodily, mind, temporal, and spatial relations. The gestalt of a technological relation is actually a unity of many relations as the example in Figure 6.2 demonstrates. This figure updates the original co-constituting relation from Figure 3.1. We perceive these multiple relations all at once, in a mostly singular/gestalt manner. Figure 6.2 demonstrates a way of visualizing the unpacking of this 'singularity' into the different groups of relations that occur during the museum selfie.
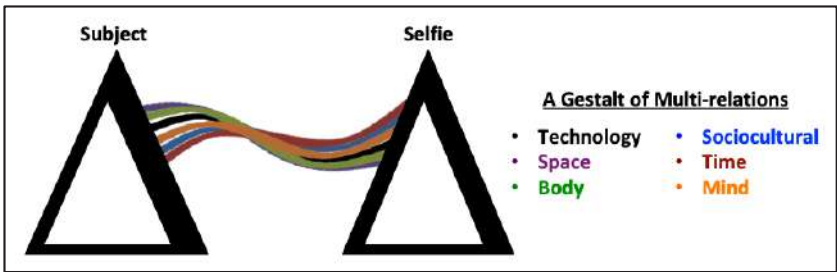
Fig. 6.2 *Multi-relationality of the Museum Selfie.* Image by author (2020), CC BY-NC 4.0.

The first questions for the instrument to help answer are: What are the relations that were involved in this subject-selfie constitution; and How much influence did they have? I use a spreadsheet (Table 6.1) in order to brainstorm as many specific relations in each grouping that I can think of that were influencing me at the moment when I took the museum selfie. This step identifies the multiplicity of relations that contribute in the 'singular' moment of taking a selfie. The spreadsheet is organized to use the framework as a facilitating cartography for self-inquiry, with the groups and subgroups helping me to focus on a narrower portion of the entirety of relations that could be contributing at the specific moment.

After listing the relations in Table 6.1, I then provide a rating for how much the relation influenced the subject-selfie constitution. I use a very basic scale to do so. The numbers in the light blue cells represent this influence as interpreted by me at a specific point in time, giving a three

for the most influencing and going down to a zero for relations with no discernable influence. This interpretation is specific and changeable over time (emphasizing why time is also a group of relations), as I discovered when I went through the numbers months later. Totaling the average influences for each group offers a general comparative sense of how much each group impacts the subject-selfie constitution—again, not in an objective sense—but in a subjectively interpretive sense as a way to ask, How do I think and feel each of these groups influenced me at the moment I took this museum selfie?

| 3 = Heavy influence | | 1 = Light influence | |
| 2 = Moderate influence | | 0 = No discernable influence | |

Relation's influence on subject-selfie constitution		Relation's influence on subject-selfie constitution	
See museum object and imagine possible selfie	3	Am I hungry? Or tired?	2
Direction of my awareness: selfie, others, museum?	3	How is my formerly broken heel doing?	2
The specific self I am trying to construct	3	Am I too hot or cold?	2
My desire to learn	3	Can my eyes see the screen very well?	3
My interest in following the curatorial information	1	Is my body chemistry in balance?	2
Perceive object thru its history, curator, or my own lens	3	How distracting is my headache?	2
Attention towards my senses: hearing, smelling, feeling	2	What is my sense of smell detecting?	1
My intention for visiting: academic, amusement, social	3	Is it loud or are there distracting sounds?	2
My intention/desire for taking the selfie: object relation	3	Are there visual distractions?	2
My state of with mind regards to time: hurried, relaxed	3	Does my bodily appearance attract attention?	1
Mind_Average	**2.7**	**Body_Average**	**2**

Ideas from other museum selfies I've seen	3	How close can I get?	3
My own experience taking selfies w/ phone	3	How many people are around me?	3
Past experience of museums	2	What is the physical space around the object?	3
History of the specific object	2	Is there a frame or case?	2
Past experience as a photographer	3	Enough light to show both me and the object?	3
How much have I been using social media?	2	How far away do I hold the camera phone?	2
What is my future goal for taking the selfie?	2	How is the lack of nature affecting me?	2
Who will I share it with?	3	What is the overall feeling of the space?	2
Time_Average	**2.5**	**Space_Average**	**2.5**

Who is judging me?	3	Are my clothes restricting or comfortable?	2
Who am I disturbing?	3	Is my camera/phone charged?	2
Is this my culture, am I a foreigner or tourist?	2	Do I know how to turn off flash?	2
Are others taking selfies as well?	3	Do I set a filter/edit now or use FB/Instagram?	3
What would my family think of me?	2	Do I have cell reception?	1
Class pressures: high class=museum, low class=selfie?	2	Is the phone sensitive enough for poor light?	3
Can I read the descriptions in my language?	1	Upload to social media or edit first?	2
Pressure from norms or power not to take a selfie?	3	Do I tag friends or limit sharing?	2
Am I a privliged/entitled race, or an 'othered' minority?	2	Is the camera lens clean?	1
Is there a guard around?	3	Need for reading glasses to see the screen?	2
Sociocultural_Average	**2.4**	**Technology_Average**	**2.0**
		Total_Average	**2.3**

Table 6.1 *Relational Influences on Subject-selfie Constitution*. Table by author (2020).

For the purpose of this research, I briefly analyze the groups and subgroups that had an effect on the subject-selfie constitution. I do not

go into depth as to why I have given certain ratings and why I have identified these specific relations. Instead, the emphasis is to develop an instrument that can be used to encourage critical awareness of what happens when I engage with a specific media technology. I believe that this critical self-awareness is the key to helping people increase their media literacy. The instrument provides an autoethnographic process that people can use to investigate more deeply their relations with technologies. I now examine the various groups and subgroups and explain my thinking process for each in regards to the subject-selfie constitution.

Mind

I begin discussing the instrument by inquiring about the relations that are connected with the mind. I identify subgroups of imagination, identity, and awareness/perception to help narrow the focus and facilitate uncovering influencing relations. While these are not the only three subgroups that can make up the mind, I find them to be useful in identifying relations that I experienced while taking the museum selfie. After filling out Table 6.1, it is clear that the mind had the largest impact upon the subject-selfie constitution according to my evaluation.

Imagination

My imagination is the key relation that enables me to perceive the possibility of taking the selfie with the bust. The creative ability of my imagination is essential, a word not used lightly, especially in postphenomenological circles.[6] First, I use my imagination in order to notice a potential selfie that combines both the museum object and myself. I also have the desire to create a selfie with some aesthetics; a certain amount of artistic quality. My imagination is assimilating many variables in order to combine what I am seeing in order to create an artistic selfie worthy (in my mind) of representing me, one that I want

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6   Postphenomenology is avidly anti-essentialist, primarily using the concept of multistability to resist considering that technologies have any essential aspect to them. Additionally, it is the imagination that is the source for our ability to recognize technology (see Chapter 5).

to share with my social group (which is middle-income, predominantly white, from U.S. or Europe, politically liberal, and educated).

Identity

I next discuss the subgroup of identity. The construction of one's own identity is, as John Falk (2009) notes, the main reason that visitors go to museums. The selfie is a very effective tool for identity construction (cf. Kozinets et al., 2017; Rettberg, 2014). Some questions of identity for me include: Am I being, or constructing, an academic self? Do I want to be funny or amusing for my friends? Am I trying to learn and follow the curatorial framing of the museum objects? For me, for this particular selfie, I am primarily being affected by my self-image as a photographer, and I am attempting to create a selfie that has artistic merit. In part, I want the selfie to demonstrate to an academic audience that selfies are not necessarily superficial or narcissistic, but rather a vehicle for identity construction.

Another identity-influencing factor for this specific selfie comes from my own experience. I studied Buddhism in Nepal for several months and this particular bust of a meditating Buddha connects with my own practice of meditation. This connection inspires me to compare myself with the bust. I take the selfie to juxtapose my own path to enlightenment while being present in the moment of taking a selfie, something that I have conflicting feelings about. This conflict is likely why my own face does not reflect the same peaceful state as that of the Buddha.

Perception/Awareness

The last subgroup of the mind that I use to analyze the selfie is that of perception or awareness. My mind's directed perception (awareness) is on creating artistic selfies. This excludes, or diminishes, my ability to perceive other things or other aspects of my surroundings in the museum. I am not paying close attention to the curatorial signage, except occasionally when an object especially strikes my interest, or when I want the name and title of the object because I have taken a selfie with it. While my goal is primarily to make an artistic and aesthetically pleasing selfie, my awareness is also directed toward my own experience.

I attempt to watch and take note of my experiences using the selfie-as-technology, in a phenomenological manner.

However, my awareness is usurped by the other museum visitors because I am sensitive to how others might be perceiving me if they see me taking a selfie. I have the sense that I am alienating the people in my immediate proximity by what Galit Wellner (2016) calls the wall/window aspect of smartphones. These phones can open a window to a virtual social group but also create a wall for the surrounding people in the area. I am concerned with alienating those around me, and this focuses my attention on watching for other visitors while also looking for possible selfies. The impact of the people around me is the most unexpected aspect of my experience in the museum. This in part might have to do with being in a different culture (Belgium instead of the U.S.) and not wanting to draw attention to myself or make a cultural faux pas.

Body

While I evaluate my mind's relations as the most influencing group, my body's relations were the least influencing. This was likely because my body, though just over fifty years old at the time of the selfie, was still in decent shape and had no major physical impediments. The most significant bodily challenge I experienced was my need for reading glasses and the fact that my smartphone screen was quite small. My eyes were no longer able to focus well on things that were close to my face, causing me to rely on using reading glasses in order to see things in detail that are near to me. I experienced this in the darkened museum while attempting to take selfies. For the most part I chose not to keep taking my reading glasses out of my coat pocket, even though my compromised vision kept the technology from receding into the background as I strained to see what was on the screen. This also dissuaded me from doing any editing or using any filters or even sending out any of the selfies that I took while in the museum.

By the time I took the selfie with the bust I had been in the museum for several hours. I was getting hungry and my feet were beginning to ache. I broke my heel many years before, and after several hours of walking I develop a significant amount of pain. Both the hunger and the pain contributed to a desire to leave the museum. Therefore, at the point

where I took the bust selfie, I was beginning to hurry, bypassing some museum objects that could potentially make for good selfies. However, the opportunity with the bust and my imaginative ability to see the potential of the selfie was able to overcome my bodily desire to keep walking to the exit.

Time

Temporal relations include the direct past and future relations. An example of the direct past relation in my experience of taking a museum selfie is my consideration of the head of the Buddha being from the seventeenth century and wonder at how it had come through all of the years to wind up at the museum. Much of what is in museums is geared toward objects and cultures from the past.

The future-directedness is also an influence. My desire to create a selfie is one of the most influential aspects in how I perceive and relate with the museum as I walk around. I am less focused on the objects for what they are and more focused on how they can make an interesting and artistic selfie. One of my goals is to share the selfie online with the hashtag #museumselfieday. This inspires me to take a selfie that I can be proud of, one that has artistic merit in my eyes and hopefully the eyes of others. I am also using the experience as an academic investigation for my research. Therefore, I am being self-reflexive, as I am analyzing my own experience as I experience it.

The future also affects the present because I have something to do after the museum visit, and by the time I arrive at the Buddha sculpture I am 'running out of time'. This, along with my bodily fatigue, contributes to my sense of rushing through the last part of the museum. Alternatively, if I had no plans and was using the museum to 'pass time', then I would experience the opposite effect. I would likely linger longer at objects that seemed interesting.

Space

One of the main influencing relations regarding proximity that affected taking the museum selfie was how close I could get to the museum artifact. Many of the objects in the temporary Ukiyo-E exhibit were

encased in glass or separated from the public by ropes. I found that, especially with the dim lighting, I needed to get quite close to the objects in order to create a good selfie. For this particular selfie (see Fig. 6.1) the object was simply on a pedestal, and I was able to get quite close and therefore able to juxtapose my head with the statue. The other proximity factor, which I have already alluded to, was the proximity of other people (cf. above and below).

Though nature did not play an active role in the creation of the museum selfie, it often plays a significant role in many other situations. However, the role it played in the museum selfie constitution was one of absence. The lack of nature and natural light can also be a significant, if subtle, relation. Our disconnection with nature affects us. After being inside a completely constructed and controlled environment for many hours it was a pleasure to leave and enter the park surrounding the museum.

Sociocultural

This grouping of relations contains many relevant subgroups. If I am performing a primarily critical media literacy investigation, this group would be one of the most extensive sections in my analysis. There are various normative relations that can be identified. I ask myself the predominant question: Who is judging me? As a foreigner living in Brussels, there is the question of belonging. Even though Brussels is a very international city and the majority of people are not native to the city, as a non-European citizen there is a part of me that does not quite feel like I belong. This is a much smaller element of self that arises than if I lived in another city such as Paris, where there is a stronger sense of cultural identity, which leads those who are not originally from the culture to feel othered by those who are. Also, if other people are taking selfies, I potentially feel less uncomfortable. Or, if I am a person who is an active selfie taker, I likely would feel less self-imposed judgment.

Sociocultural - Normativity

My biggest surprise was my own feeling of self-consciousness for taking selfies. While this was 'museum selfie day', there were no other people that I came across who were taking selfies. For this particular museum,

the day was not being promoted, so I did not feel any official approval for taking selfies. While there was no demonstrable hostility towards me, I did my best not to be noticed taking selfies. This was not a small concern but an intrusive feeling that greatly impeded my selfie taking. The influence of this particular relation was more determining than any other relation that day, and one that came as a surprise as I was expecting to mainly be concentrating on how the technological relations were influencing me. This demonstrated my own too-narrow approach when I went to engage with my research.

Sociocultural - Language

Language plays a significant role in how we are constituted and is deeply connected with our sociocultural relations. As a native English speaker and a person who has a passable amount of French, I can understand most of the museum signage and explanations. Most of the other visitors do not speak English and, if they do speak French, I do not attend to what they are saying. There are times when language, or lack of language, can play a more influential role. There is also a way of using language as a dominant approach to understanding how we are constituted (cf. Coeckelbergh, 2017 for a study on language and technology). However, in an attempt to limit the scope of my investigation, I create a placeholder for this topic but I do not fully engage with it here.

Sociocultural - Power/Politics

I have visited many museums over the course of my life, so I feel quite comfortable in the role of a museum visitor. I do not feel out of place, except for while I am taking selfies. This can be a combination of two cultural aspects. The first I describe above under normativity. The second is more along the lines of Foucault's perspective of power relations and the control of institutions like museums upon the society. I have been brought up (and this relates to my own sedimented experience with museums) with the idea that museums are the epitome of culture and they hold a certain reverence for me. Analyzing the research, it is clear that selfies are not just one thing; they can be both powerful and significant vehicles to construct or share one's identity (Abidin, 2016;

Dinhopl & Gretzel, 2016; Hess, 2015; Kozinets et al., 2017; Rettberg, 2014; Risam, 2018; Senft & Baym, 2015). There are now many genres of selfies, some of which include: refugee, political, gender-diverse, and other genres that help bring marginalized groups a way to be seen.

While selfies enable identity construction, they also reflect a disruption in the museum experience (Clines, 2017; Kozinets et al., 2017; Lewis, 2017; Russo et al., 2008). As Mar Dixon's definition of museum selfie day demonstrates, selfies have a bias towards fun and entertainment, which does not mean they cannot be used for serious matters, only that one of their primary uses has been geared toward amusement. This can conflict with the traditional approach to museums, which has had a more serious and austere presence, one directed more towards education than entertainment. Even though education and entertainment need not be mutually exclusive, one of the challenges is the expectation of museum visitors. People wanting a quiet and reflective moment with an object may likely object to other 'less serious' visitors who simply want to capture an interesting selfie to share with their friends. I experience a conflicting, or at least ambiguous, feeling while taking museum selfies. I recognize an internal judgment and question if I am being disrespectful towards these cultural objects, wondering if I am belittling their cultural past and their present cultural role within the museum.

Sociocultural - Museum Effect

There is a sociocultural phenomenon called the *museum effect.* Valerie Casey (2003) is one of several researchers who analyzes museum visitor-object relationships and describes the museum itself as having an effect on everything, both people and objects, which enter through its doors. Museums re-contextualize objects from their origins through specific narratives, proximity to other objects, the use of labels, and through contextualizing meta-language. However, Casey (2003) and others (cf. Malraux, 1967; Kirshenblatt-Gimblett, 1998; Henning, 2006; and Alpers, 1991) point out that objects also become meaningful just by entering through the doors of the museum. They become identified as culturally important by virtue of being chosen by a museum. Again, the idea of enabling and constraining is raised. The importance of the object

might be enabled, but seeing the object for its original purpose—or even in new ways by the visitor without the filter of the museum—is now constrained (Lewis, 2017: 95).

Technology

There are both simple and complicated technologies that contribute to the subject-selfie constitution. However, if artificial intelligence (AI) software is developed for smartphone cameras, then it may not be too long before complex technologies can also play a role in museum selfies. Until then, I can integrate AI through Google's Deep Dream Generator[7] to manipulate photos. Figure 6.3 is an example of this hybrid human-AI collaboration. While I supply the original photo (see Fig. 6.1), the Deep Dream Generator uses its own AI algorithm in order to manipulate the original. I still have some control in deciding which type of manipulation I want and how much I want it manipulated, but otherwise the AI accomplishes the actual process.

The smartphone is a very complicated device with many functions. For selfies, I see through the smartphone screen, meaning there is an embodied relation happening. And, while I could be using the phone's black and white filter (the final selfie is in black and white), I take the selfie in color, knowing I can alter it with software on my home computer at a later time. As I situate myself next to the bust that I want my selfie to be with, I look through the iPhone screen, which shows me how my selfie will turn out thanks to the front-facing camera. While this enables me to compose the selfie, it also constrains my depth perception and the wider area around me, cutting out a visual chunk of reality. This constraint has, unfortunately, contributed to the damage of several museum objects such as a statue of St. Michael in Lisbon (Lewis, 2017).

While I could take advantage of the digital image, which affords the possibility—unlike a print photograph—to immediately upload the selfie to social networks, allowing my friends to more temporally share in the actual moment with me, I choose to wait until later to do so. This is in part due to my difficulty focusing on the small screen of my phone, but it also allows me to take my time in making adjustments to the images using the software and larger screen on my laptop.

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7   https://deepdreamgenerator.com

Fig. 6.3 *Museum Selfie and AI Hybrid*. Manipulation created using Deep Dream Generator. Image by author (2020), CC BY-NC 4.0.

In my experience taking a museum selfie, there are also many simple technologies at work. For instance, the bust sits upon a pedestal, which is lucky for me as it allows me to get close. In contrast, other museum objects have ropes keeping visitors from approaching too close to the museum objects. If we think of technology as a continuum, moving from simple to complicated to complex, my clothes might be considered as being between simple and complicated technology; they influence my movement, what I can carry in pockets, and if I am warm or cool in temperature. Museum lighting also influences taking the selfie and can be considered on the continuum between simple and complicated. Other simple aspects related to technological relations concern things like my glasses and the phone's camera lens being clean or needing to be cleaned.

Intrasubjective Mediation and the Relational Groups

Besides the direct relations just explained, I experience a lot of intrasubjective mediation (ISM) related to previous experiences. This is captured by the question, How do my past experiences mediate the selfie-subject constitution? To demonstrate the influence of intrasubjective mediation, I briefly review how my past experiences with each group of relations influence the subject-selfie constitution intrasubjectively.

Mind and ISM

Before going to the museum, I conducted research on museums, selfies, and museum selfies in particular. There were many different types of selfies, and exploring the range of some of what had come before gave me ideas of how I could potentially frame myself with the museum object. These possible framings allowed me to overlay them with the museum objects I was coming across. In addition, my experience as a semi-professional photographer influenced my ability to imagine and compose the selfies that I was taking.

Body and ISM

The primary temporal effect on my bodily relations was the sedimented action of taking selfies with my smartphone, which involved physically manipulating not only the settings of the camera phone, but also situating my body in relation to the camera, myself, and the museum object—holding the camera in such a way that I could then take the selfie when everything was aligned. This was awkward to do at first, but eventually the action became more embodied and the manipulation of the technology became more transparent.

Space and ISM

While I had been in many museums throughout my life, I had never been in the Art and History Museum. This made me unsure of the layout of the museum and somewhat hesitant as I explored. I did not know what there was to see or even how much there was to see. This lack of experience made me unsure and a bit unsettled in my mind as

I attempted to navigate beyond the main Ukiyo-e exhibit and enter the permanent collection area.

Sociocultural and ISM

Because I have had many experiences in European museums, I felt comfortable being there. And, because of my limited amount of experience taking selfies in public, I did not feel comfortable doing that. Part of this stemmed from my own upbringing. As a child, I was taught not to disturb others when in public and to not draw undue attention to my self. I have also run across U.S. citizens in Europe who, unfortunately, fell into a stereotype of being loud and seemingly oblivious to the culture around them. Not behaving in that way has always been a goal of mine, especially when in another culture.

Technology and ISM

Part of this relation was explained with the body-ISM section above. My use of taking photos with my smartphone, not just selfies, contributed to my ability to manipulate the technology in order to take the museum selfie. My past experience with social media also gave me ideas about how I might want to use filters or hashtags when I uploaded the selfie to social media.

This concludes the overview of the first step in using the instrument to identify and evaluate some of the relevant relations that exist when I take a selfie (see Fig. 6.1). However, the experience is more complex than simply a multiplicity of these *primary* relations. The term 'primary' is used here to indicate the direct relation between a subject and whatever they are relating with, no matter what relational grouping is involved. However, there are *secondary* interrelations that affect these primary relations. These are discussed next.

Interrelationality

The direct relations discussed above are both enhanced or constrained by other relations. There are no standalone relations. While all relations and interrelations happen in one moment of co-constitution, we can gently pull apart the phenomenon of this interrelating moment in order

to identify some of the complex entanglement. Therefore, the next step consists of analyzing how relations from other groups affect the relations listed previously. The instrument is one way to engage with the framework in order to provide clarity without removing the complexity altogether. The goal of the instrument is to create a practical way to leverage the framework for a specific situation. The framework itself should be viewed in an open way, available for creative interpretation by whomever is using it.

While Table 6.1 demonstrates each specific relation's influence on the subject-selfie constitution, it is Table 6.2 that captures the interrelations that occur. This table shows the relations in Table 6.1 and then adds how I felt (at the time) each group or subgroup of relations influenced each specific relation. This table reflects the entanglement of the interrelations that contribute to the constitution of the subject-selfie. As with most quantifiable representations of reality, the numbers should only be considered a snapshot in time and are embedded with bias and interpretation. However, my intent is less to show the specific detail of exactly how each group interrelates and influences each other than to portray the broader effect of interrelationality in order to emphasize the fact that any situation is comprised of not just one relation, even though we experience an event in a gestalt manner.

The right-hand columns should be read in a downward direction, reflecting how the relations in that group or subgroup influence the direct relations listed on the left. For example, the far-right column 'Technology' is listed as affecting the first direct relation: 'See museum object and imagine possible selfie' with a moderate influence (value=2). By filling out this spreadsheet, the media user can be guided to reflexively identify many underlying relations that they may not have noticed and also analyze the interrelating influences from a variety of sources. The spreadsheet is a way to realize how media are situated within an entanglement of relations, all interrelating and influencing each other.

After assigning a value for each interrelating relation, I create an average for the group or subgroup for each section. I then take this average (or the largest subgroup average) and create Table 6.3. This table reflects the significant interrelating impact of one group on another group. This table should be read left to right. For instance, the first line shows that relations from the mind group have a significant impact of

3 = Heavy influence
2 = Moderate influence
1 = Light influence
0 = No discernable influence

	Relation's influence on subject-selfie constitution		Mind_Imagination	Mind_Identity	Mind_Awareness	Body	Time_Past	Time_Future	Space	Cultural_Normative	Cultural_Language	Cultural_Politics	Technology
										Affecting Interrelations			
Mind	See museum object and imagine possible selfie	3	3	1	1	2	2	3	3	2	0	0	2
	Direction of my awareness: selfie, others, museum?	3	3	2	1	1	3	2	2	2	0	0	2
	The specific self I am trying to construct	3	3	3	3	1	3	3	1	3	0	2	2
	My desire to learn	3	3	3	3	1	3	2	0	3	0	1	1
	My interest in following the curatorial information	1	1	2	3	0	3	2	0	3	1	1	1
	Perceiving object thru its history, curator, or my own lens	3	2	3	3	0	2	2	3	3	1	2	2
	Attention towards my senses: hearing, smelling, feeling	2	2	1	0	3	2	1	3	2	1	1	2
	Intention for visiting: academic, amusement social?	3	2	3	3	1	3	2	1	3	1	2	1
	My intention/desire for taking the selfie: object relation	3	2	3	3	2	1	3	0	3	0	0	2
	My state of mind regards to time: hurried, relaxed	3	3	2	1	1	2	3	1	2	0	0	1
	Mind_Average	**2.7**	**2.4**	**2.3**	**2.1**	**1.2**	**2.5**	**2.3**	**1.6**	**2.6**	**0.5**	**1.1**	**1.6**
Body	Am I hungry? Or tired?	2	2	1	0	3	2	2	0	1	0	0	0
	How is my formerly broken heel doing?	2	2	1	0	3	2	2	2	2	0	0	0
	Am I too hot or cold?	2	2	1	0	3	2	3	3	2	0	0	3
	Can my eyes see the screen very well?	3	1	1	1	3	1	1	3	1	0	0	3
	Is my body chemistry in balance?	2	3	2	1	3	2	1	1	2	0	0	2
	How distracting is my headache?	2	2	1	2	2	1	0	1	1	0	0	2
	What is my sense of smell detecting?	1	3	2	3	3	1	1	1	2	0	0	1
	Is it loud or are there distracting sounds?	2	2	1	3	3	1	1	2	2	0	0	2
	Are there visual distractions?	2	2	1	2	3	1	1	3	2	0	0	2
	Does my bodily appearance attract attention?	1	3	2	1	3	2	1	3	3	0	0	2
	Body_Average	**1.9**	**2.2**	**1.2**	**1.4**	**2.9**	**1.5**	**1.2**	**1.7**	**1.9**	**0.0**	**0.0**	**1.7**
Temporality	Ideas from other museum selfies I've seen	3	3	1	1	2	3	2	0	2	1	1	3
	My own experience taking selfies w/ phone	3	2	2	2	2	3	1	0	3	0	1	3
	Past experience of museums	2	2	3	3	0	3	1	0	3	0	0	2
	History of the specific object	2	2	3	3	3	3	1	0	2	0	2	2
	Past experience as a photographer	3	2	3	3	2	3	1	0	2	0	1	3
	How much have I been using social media?	2	2	2	2	1	3	1	0	3	0	1	3
	What is my future goal for taking the selfie?	2	3	2	1	1	1	3	3	3	0	0	2
	Who will I share it with?	3	3	2	1	1	2	1	0	3	0	0	2
	Time_Average	**2.5**	**2.4**	**2.1**	**2.0**	**1.1**	**2.6**	**1.5**	**0.1**	**2.6**	**0.1**	**0.8**	**2.5**

	Relation's influence on subject-selfie constitution		Affecting Interrelations										
			Mind_Imagination	Mind_Identity	Mind_Awareness	Body	Time_Past	Time_Future	Space	Cultural_Normative	Cultural_Language	Cultural_Politics	Technology
Space	How close can I get?	3	1	1	1	2	0	2	3	3	0	3	3
	How many people are around me?	3	2	1	0	1	1	1	3	3	0	1	2
	What is the physical space around object?	3	3	1	1	2	0	0	3	2	0	1	3
	Is there a frame or case?	2	1	0	1	1	1	0	3	1	0	1	3
	Is there enough light to show both me and the object?	3	3	1	1	2	2	1	3	3	0	1	3
	How far away do I hold the camera phone?	2	2	0	1	2	1	2	3	2	0	1	3
	How is the lack of nature affecting me?	2	2	1	1	2	1	2	2	2	0	0	3
	What is the overall feeling of the space?	2	2	1	2	2	2	1	3	3	0	1	3
	Space_Average	**2.5**	**2.0**	**0.8**	**1.0**	**1.8**	**1.1**	**1.0**	**2.8**	**2.4**	**0.0**	**1.1**	**2.9**
Sociocultural	Who is judging me?	3	3	3	1	3	3	3	0	3	0	3	2
	Who am I disturbing?	3	3	3	3	1	3	2	2	3	0	2	2
	Is this my culture, am I a foreigner or tourist?	2	3	3	3	2	3	2	1	3	0	2	2
	Are others taking selfies as well?	3	2	2	2	0	1	1	2	3	0	1	2
	What would my family think of me?	2	3	3	3	1	3	3	0	3	0	2	2
	Class pressures: high class=museum, low class=selfie?	2	3	3	3	1	3	1	0	3	0	3	2
	Can I read the descriptions in my language?	1	2	2	2	1	3	1	1	3	3	1	2
	Pressure from norms or power not to take a selfie?	3	3	3	3	1	3	3	1	3	0	1	2
	Am I a privilged/entitled race, or an 'othered' minority?	2	2	3	1	1	3	2	1	3	0	3	2
	Is there a guard around?	3	3	1	1	2	2	3	2	3	0	3	2
	Sociocultural_Average	**2.4**	**2.7**	**2.7**	**2.6**	**1.2**	**2.7**	**2.2**	**0.9**	**3.0**	**0.3**	**1.9**	**2.0**
Technology	Are my clothes restricting or comfortable?	2	2	2	2	3	2	1	1	3	0	1	3
	Is my camera/phone charged?	2	2	1	0	1	3	3	0	2	0	0	3
	Do I know how to turn off flash?	2	2	1	0	0	3	2	0	3	0	2	3
	Do I set a filter/edit now or use FB/Instagram?	3	3	2	1	1	2	3	0	3	0	1	3
	Do I have cell reception?	1	1	1	1	0	0	0	2	0	0	0	3
	Is the phone sensitive enough for poor light?	3	2	1	0	1	2	2	0	1	0	0	3
	Upload to social media or edit first?	2	2	2	1	0	2	2	1	3	0	1	3
	Do I tag friends or limit sharing?	2	2	2	1	1	2	3	0	3	0	1	3
	Is the camera lens clean?	1	1	1	1	0	1	1	1	2	0	0	3
	Need for reading glasses to see the screen?	2	2	3	1	2	2	3	1	3	0	1	3
	Media-Tech_Average	**2.0**	**1.9**	**1.6**	**1.2**	**1.0**	**1.8**	**2.0**	**0.5**	**2.3**	**0.0**	**0.7**	**3.0**
	Total_Average	**2.3**	**2.3**	**1.8**	**1.7**	**1.5**	**2.1**	**1.7**	**1.3**	**2.5**	**0.2**	**0.9**	**2.3**

Table 6.2 *Interrelational Influences on Subject-selfie Constitution.* Table by author (2020).

2.2 upon the direct relations in the body group. The averages allow us to reflect on the asymmetry involved between the groups, meaning one group might affect another group significantly but is not significantly affected in return. For example, reversing the mind to body example just used, the body only has a slight influence of 1.1 upon the direct relations involving the mind. Reviewing the table also is a chance to question the results. For instance, the table reflects that technology greatly influences spatial relations (2.9). At the same time, spatial relations only slightly influence technological relations (.5). Is this true? Can I analyze this result to bring up counter relations that disprove this outcome?

	Mind	Body	Time	Space	Sociocultural	Tech
Mind	2.4	2.2	2.4	2	2.7	1.9
Body	1.1	2.9	1.1	1.8	1.2	1
Time	2.5	1.5	2.6	1.1	2.7	2
Space	1.6	1.7	.1	2.8	.9	.5
Sociocultural	2.6	1.9	2.6	2.4	3	2.3
Technological	1.6	1.7	2.5	2.9	2	3

Table 6.3 *Interrelational Average Influences* (3=strong, 2=medium, 1=weak). Table by author (2020).

The summary of averages in Table 6.3 is not to be used to indicate general truisms between groups, but rather it reflects the media user's specific experience of interrelations concerning a specific selfie at a specific time. Since the table is filled out on the micro level of specific relations, the averages enable me to check the results on a macro level. This can help facilitate a deeper investigation and help me potentially think of relations that I did not at first consider. I present this table in order to demonstrate various ways researchers can use the framework and instrument in order to engage with interrelational influences for specific research investigations.

Complexity

Interrelationality rests upon a foundation of complexity (cf. Chapter 4). It is not actually possible to come up with an objective number that represents the influence of any one relation. While this subjective

analysis might rankle a reader looking for objective truth, that is not the goal of this framework or instrument. The goal is to better understand the human subject. An important aspect of complexity relating to the evaluation of this instrument is that, as complex systems, we are emergent, non-linear, and open systems.

Complexity can be understood historically, but it is unable to predict the impact of future relations. When we rate our relations, we are doing so after that fact, meaning that we are rating our perception of the actual effect that the relation caused. For example, before I went to the museum it did not even occur to me that the proximity of other people would affect me. However, this relation was the most significant of all influences. An interesting experiment would be to complete a version of the instrument before actually participating in an event, and then complete another one after the event in order to compare expectations and the actual experience. I explore various ways of generalizing the framework and instrument in the next section.

The culminating spreadsheet (Table 6.2) was, in a way, an endpoint to my beginning. I began investigating technological relations by experiencing taking museum selfies and comparing that experience to the postphenomenological approach that I was studying. However, what I experienced was not completely captured by postphenomenology, and so I began to expand my search in an attempt to more fully connect theory and practice. This led to asking about the 'I' that was experiencing and gathering concepts from various fields of study in order to bring them altogether. Looking back shows a clear path, but when I was going forward through this experience it was an open process without the intention of creating a framework or tool that could help with media literacy. This reflected the complex process that was emergent and not predictable.

Even if they happen to be virtual interactions, our interactions with media and media technologies happen in 'real life'. In order to understand the complexity that is involved, it is helpful to investigate some of the specific interrelations involved in order to then have a better understanding of how the media relations are situated and interconnected within our own lifeworld. While domestication theory (cf. Chapter 2) makes the important step to include the context of the media use, the intrasubjective mediating framework attempts to situate

our media use even further. The next section continues implementing the theory by investigating how the theory and instrument discussed in this section might be pragmatically used for enhancing media literacy.

Generalizing the Framework and Instrument for Media Literacy

Now that the intrasubjective mediating framework and instrument have been developed through the analysis of a museum selfie, I begin exploring how they could be generalized for media education. I do this by imagining the instrument being used in a university-level media studies or media literacy course. I am not presenting a fully formed curriculum, but simply a possible way to practically implement this posthuman approach. Though it can be used in other ways, for example with younger students, I believe starting with the university level is a good initial choice as younger students would likely need the instrument to be re-worked and simplified.

I had the good fortune to be able to lead a small group of Master's level students through a course designed around this posthuman approach. This allowed me to perform a small initial usability study for the framework and instrument, which provided valuable feedback and a chance to generalize the instrument and create an exercise just before the publication of this book. The instructions for the exercise are below. Updated instructions, as well as a generalized and simplified spreadsheet, are available on the listing for this book on Open Book Publishers' website.[8]

It is through the process of doing the exercise that students will more fully grasp the academic ideas discussed so far. Through my work at Prescott College in the U. S., I have found that experiential education is one of the strongest pedagogical tools that a teacher can employ. The exercise below can allow students to experience the concepts for themselves, allowing the learning to become more deeply embodied.

My hope is that many teachers will find a seed of inspiration in this approach to media literacy and will continue developing unique ways

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8   Look under the 'Additional Resources' tab at https://www.openbookpublishers.com/product/1405

to leverage the framework as a pedagogical instrument. Douglas Kellner and Jeff Share (2005) note, 'Computer and multimedia technologies demand novel skills and competencies and if education is to be relevant to the problems and challenges of contemporary life, engaged teachers must expand the concept of literacy and develop new curricula and pedagogies' (369–70).

This autoethnographic approach can specifically help people reflect on the influences involved when they engage with media in order to become more aware of how media is situated within a complexity of interrelations. The media affect and are affected by these interrelations. As Kellner and Share (2005) also point out, 'Individuals are often not aware that they are being educated and constructed by media culture, as its pedagogy is frequently invisible and unconscious' (372). The posthuman approach acts as a cartography to help reveal these influences.

Posthuman Approach Exercise: Learning by Doing

How can we critically evaluate the effects of technologies in order to decide if and how to engage with them?

The goal of this exercise is to help students reflect on the complexity of influences involved when they engage with technologies in order to become more aware of how they are situated within a complexity of interrelations. All technologies affect and are affected by these interrelations. This exercise is used to reveal (foreground) the many relations that are simultaneously happening when we engage with technologies. This posthuman approach acts as a cartography to help reveal these hidden influences, bringing us to the point of being able to critically decide how we want to engage with them.

The term 'engagement' refers to the student's *phenomenological* experience with a specific innovative technology. The student here puts aside their judgement and strives to become aware of the various relations that are occurring at the time of their experience with the technology. The first step of deciding which technology to engage with (and exactly how) is critical, as some types of technologies may work well and others may not. Modification and improvements, in discussion with the instructor, are welcomed.

A conceptual review:

- The relations in our lifeworld transform us through a continual interrelating process, enabling and constraining our selves and each other.

- The relations can be gathered into loose groupings, though not all relations can be known or are knowable.

- These relations interrelate—enhancing and constraining each other—in complex (potentially non predictive) ways.

Through awareness of these points, we have the ability to increase our agency.

Step One: Identify

Identify a technology that you want to engage with. Be specific in what you will experience. This will be an autoethnographic investigation, as you will be analyzing yourself engaging with a specific technology in a specific way during a specific time. For instance, instead of investigating 'how Instagram affects teenage youths', narrow it down to investigating 'Recording and sharing my exercise workout through fitness selfies on Instagram'. It would also be possible to compare two similar experiences, one using a recent technology and another using a technology it replaced. For example, compare the exploration of a new city through a GPS based smartphone app to experiencing a new city with a paper map.

The instructor should approve the idea before continuing. The instructor may also want the student to do some background research about the technology. This can help the student become more familiar and understand what preceding technologies transformed into the one they are studying. For instance, the smartphone evolved from the phone, the camera, the GPS navigation system, and the computer (to name a few). The student will describe the specific engagement chosen on the spreadsheet (cf. Table 6.4), recording: Date, time, and duration of engagement. Also, include the location and conditions (busy, rainy, etc.)

Step Two: Framework

Review the framework (Fig. 5.1), understanding the six interconnected groups and the concept of intrasubjective mediation. To review, intrasubjective mediation is the idea that every relation transforms us in some manner, and that these transformations continue to affect the way we perceive and engage with the world (these transformations can be thought of as embodied relations). If there is a need or compelling reason, identify specific subgroups, or even a specific group for extra attention. Most students will likely use the framework as is. The framework is the foundation for the instrument.

Step Three: Pre-assessment

This is a general inquiry as to what the student believes will be the most influencing relations when they engage with the technology. The student should identify at least two or three possible relations (or questions to ask themselves) in each group in order to begin thinking about the different relations and specific relations. This allows the student to begin exploring the identification of relations.

Step Four: Engage

Intentionally engage with the event. Focus on being aware of the various relations involved. Approach the event as a phenomenological experience, attempting to bracket your own biases and judgement to become aware of all of the various relations that are involved. In other words, you will be engaging with the technology and, at the same time, opening your awareness to the often-hidden background relations. Think about the groups and subgroups to help guide your awareness to these background relations.

   Depending upon the event, it could be helpful to have a field journal to take notes and write down the specific relations. This will depend upon the event and how it is orchestrated. Writing down the relations helps acknowledge them without needing try and remember them. Patiently stay with the event, giving it time for new relations to surface. It is likely helpful to focus on one grouping of relations at a time and keep asking yourself what types of relations are happening that relate to that particular group.

6. Affecting interrelations

Mind	Body	Time	Space	Sociocultural	Technology
###	###	###	###	###	###
###	###	###	###	###	###

Influence: 3-heavy, 2-medium, 1-light, 0-none

1. Describe your engagement with technology here: When, How long, Where, What, etc...

5. Influencing relations on subject-tech constitution

Mind		Body	
Mind_Average	###	Body_Average	###

Step Five: Identifying and Evaluating Direct Relations

Now it is time to fill in the relations on the spreadsheet. Brainstorm all the relations that you can think of, taking advantage of the groups and subgroups to focus your inquiry. Write them down in column B. Remember that you can use, or modify, any of the pre-assessment relations you had written down in Step Three. You can write these as questions (how did the rain affect me?) or statements (I was affected by the rain). Ask yourself, what are all the possible relations within this group/subgroup that had an influence on the constitution of my self or the event being analyzed? These can be thought of as 'direct' relations. Analyze how they had influence upon the co-constitution of you and the technological event you engaged with. Use a 3 for highly influencing; 2 for moderately influencing; 1 for slightly influencing; and 0 for no discernable influence. It is not necessary to overthink these evaluations (unless you have a compelling reason to do so).

A note about the 'PH Instrument' spreadsheet: The spreadsheet (see Table 6.4) has formulas built into it which automatically average the ratings you will enter in Steps Five and Six. It also contains an 'Analysis' worksheet that incorporates the averages of the interrelations for Step Seven. Therefore, be careful to not delete these cells. They will show '###' until you enter numbers into the cells above them. If you have lost one of the cells that averages, you can copy an adjacent cell that has the formula and try pasting. Or, you can download a new spreadsheet and start over. If you would like to modify the spreadsheet in some way (for instance, adding subgroups), check with the instructor.

Come up with 8–10 relations for each main group. Consider if there are any subgroups that you want to focus on specifically. If you are not finding enough relations, you might look at a general relation you listed and see if you can break it into more specific parts. For example, instead of listing that 'the physical museum affected my experience', I could break that into how the museum's lighting affected me, how the rope barriers between me and the art affected me, how the glass cases housing museum artefacts affected me, etc. Some groups will be easier than others to come up with 8–10 relations, but stick with it. You should also look for slightly influencing relations, not just ones that had a significant influence.

Some possible questions for each group that you can ask yourself in order to uncover more relations are:

Mind:

- What are your intentions?
- How is your mind directing your awareness/perception?
- What is the state of your mind (relaxed, stressed, etc.)?
- Which senses are you focusing on?
- How is your imagination engaged?

Body:

- What is the current state of your body (tired, hungry, temperature, any pains, etc.)?
- How are your bodily abilities enabling/constraining you?
- What bodily skills are you engaged with?
- How are your bodily sense organs being affected: sounds, smells, tastes, feelings, vision?

Space:

- What is immediately surrounding you, and how is it affecting you?
- What attributes of the physical space are enabling and constraining?
- How is the space around you specifically affecting your engagement with the media?
- What is the composite of the space between 'natural' and 'human made'?
- If you are outside, what is the weather and how is it affecting you?

Time:

- What is the history of the media you are engaged with?
- Have your own experiences with the specific media changed how you interact with it? If so, how?

- What future plans are involved, and how do they affect your use?
- What other past experiences have contributed to the current engagement?

Sociocultural:

- What normative influences are you experiencing?
- Are you feeling judged or judging yourself?
- How is language playing a role?
- Are there any gender, class, power, or racial influences?
- Are you feeling empowered or marginalized?

Technological:

- What are the basic technologies that are affecting you (such as glasses, clothes, etc.)?
- What different technological relations are you experiencing (embodied, hermeneutic, alterity, or background)?
- How are the various technological mediums influencing you?
- What are the technological infrastructures in place for you to experience the media (wireless technology, servers, corporations, electricity/batteries…)?

<u>Draft Due</u>: Before proceeding to Step Six, the instructor should review the student's work up until this point. This is a chance to make sure the student understands how to identify and describe the various relations that are occurring. Are the relations in the proper groups? Are the relations clearly articulated? Are there also relations listed with low influence? Do all the relations fit under the specific engagement or are there some unrelated relations mentioned? The student should revise their work before going onto the next step.

Step Six: Evaluating Interrelations

The next step is to evaluate the interrelations that affected the direct relations noted above. The right-most columns (E through J) on the spreadsheet provide you the space to evaluate how the other relations

influenced each direct relation listed in Step Five. Keep the specific relation listed in column B in your mind and then ask if it was affected in any way by relations within the interrelational group you are evaluating. Use the most influential relation you can think of for each group and rate it from 3 to 0. The general purpose here is to identify and demonstrate the interconnections that occur, reflecting the complexity of interrelationality.

For instance, if my direct relation was 'See museum object and imagine a possible selfie' then I would ask myself how much the Mind relations affected this relation. Clearly, they had a lot of influence, so I put a 3 under the Mind group. How about Body relations? At the current time my body was beginning to get tired, so I would put down a 2. However, if there was something more significantly wrong with me, either my eyesight was failing, or I had another condition going on, this could have been a 3. How about Time relations? Well, my experiences seeing other museum selfies did affect me a bit, but the future potential relation really affected my engagement, so I would list a 3 under Time. Space was also a 3 since I was being mediated by the museum setup in how close I could get and how well lit the object was. Sociocultural relations were affecting me either as a 2 or 3 depending upon how many people were around me. And the technology itself was also affecting me as a 2 or 3 as I had to manipulate my smartphone in order to take the selfie.

What we are trying to do is to quantify complex relations. While this is ultimately impossible in any objective sense, we are simply trying to give approximate numbers to an interpretation of an interrelation at a particular point in time, and our evaluation will be influenced by many things. Do not worry about getting things exactly right. Instead, it is okay to simply give a subjective number that is 'good enough' to represent the particular scenario you have in your mind at that moment. There will be many ways that each group will interrelate with the specific relation you are looking at. Simply choose the most influential one that you can think of.

Step Seven: Analyze

After finishing step 6, take a step back from the details you have recorded and reflect if they make sense in a broader perspective. At the

bottom of each group's column are the averages, showing summative data. Looking at the tabs on the bottom of the worksheet (Fig. 6.4), you will notice that you have been working in the 'PH Instrument' tab. There is also an 'Analysis' tab. Click on this tab and you will be able to see in Table 1 (see Fig. 6.5) the averages for each group's direct relations (total averages for each group from column C) as well as Table 2 that shows the interrelational averages (see Fig. 6.5).
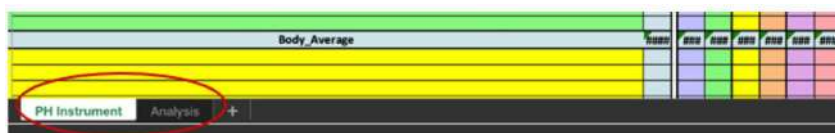
Fig. 6.4 *Worksheet tabs for switching between PH Instrument and Analysis.* Image by author (2021), CC BY 4.0

The first step is to analyze the average numbers for each group's direct influence on your engagement with the technology in Table 1. The total averages allow for a quick glance and a chance to analyze the numbers to see if they make sense to you. This is an opportunity for questioning and critique. Look especially at the highest and lowest averages. Does this seem to reflect your overall sense of your engagement with the technology? These results reflect how we are perceiving the situation at the moment we record the numbers. Can we change our perception? How are our own biases influencing these results? If there are things that do not seem right, can you think of either additional relations or ways of modifying the direct relations you evaluated in order for the average to better represent your experience?

Now, look at Table 2. This table is read from left to right. This reflects how influential the groups on the left were in co-influencing the direct relational groups on the right. This directionality can be interesting. To help explore the table, find the group that is most different from its reverse. For example, the Sociocultural group on the left might show a 2.5 influence over the Time group on the right, but the Time group on the left might only have a 1.0 influence over the Sociocultural group on the right. Do the results make sense? Are you surprised by any of the results?

We can also perform a general evaluation of the entire process. Are there other influences not captured by this worksheet, and if so, do they

Table 1. Average of each group's direct influence on the subject-technology engagement

Mind	2,1
Body	2,2
Time	2,0
Space	2,1
Sociocultural	2,4
Technology	2,6

Table 2. Average totals of each group's interrelational influence. Direction of interrelational influence →

→	Mind	Body	Time	Space	Sociocultural	Technology	Overall Total
Mind	2,6	1,6	2,1	2,0	2,8	2,3	2,2
Body	1,3	2,2	1,1	1,8	0,5	0,8	1,3
Time	1,7	1,6	2,8	1,5	1,3	0,3	1,6
Space	1,4	2,0	1,1	3,0	0,6	2,3	1,7
Sociocultural	2,2	1,3	2,3	1,6	0,6	2,3	2,0
Technology	2,4	1,4	1,5	1,8	3,0	1,5	1,9

Fig. 6.5 *Tables 1 and 2 for analysis.* Image by author (2021), CC BY 4.0.

fit somewhere or is another group or subgroup needed? For the lowest-rated groups, might there be relations that have not been considered within the group? Or, might it be necessary to enter a disclaimer stating that a particular group or subgroup was not focused on, acknowledging that there could be significant relations that had influence but lay outside the scope of the specific analysis? And finally, acknowledge the fact that we cannot know all of the relations that affect us. Not only are there some that are unknown, but there are those that are simply unknowable. Being aware that there are unknowable relations helps us keep a more realistic perspective on our own becomingness.

Step Eight: Critical Assessment

The first seven steps are all about increasing our own awareness of a relation we have with a specific technology. We did this by attempting to set aside our judgement in order to simply become aware of how we were engaging with technology. Now is the time to bring the judgement back and critically (and affirmatively) evaluate your relation with the media technology you engaged with. Your agency and empowerment reside in taking the 'uncovered' relational affects and deciding what you want to do about this new awareness. What kind of lifeworld do you want to co-create? Describe both positive and negative aspects of engaging with this specific technology. Do this for both your own perspective (how it is for you), and then more broadly for society as a whole. What are some of the broader ramifications of this technology? What would you recommend people keep in mind when engaging with it? What are ways to mitigate its negative effects and hang onto its positive effects?

Concluding Thoughts

The museum selfie is an entanglement of culture (power, normativity, and language), history, space, time (both past and future), the mind (identity, imagination, memory), and technology. While I created a quantitative instrument to better understand this entanglement, I also thought about how I could represent the underlying complexity in a gestalt manner, visually displaying the general complexity of interrelations that have an effect upon taking the museum selfie. To do so, I used a program called Circos (http://circos.ca/) to create a

background for the museum selfie. I took the data in Table 6.2 and, after many hours of experimenting, created the visual gestalt of Figure 6.6. While this visually displays the complexity of interrelationality behind the museum selfie, it of course loses much of the specific details.
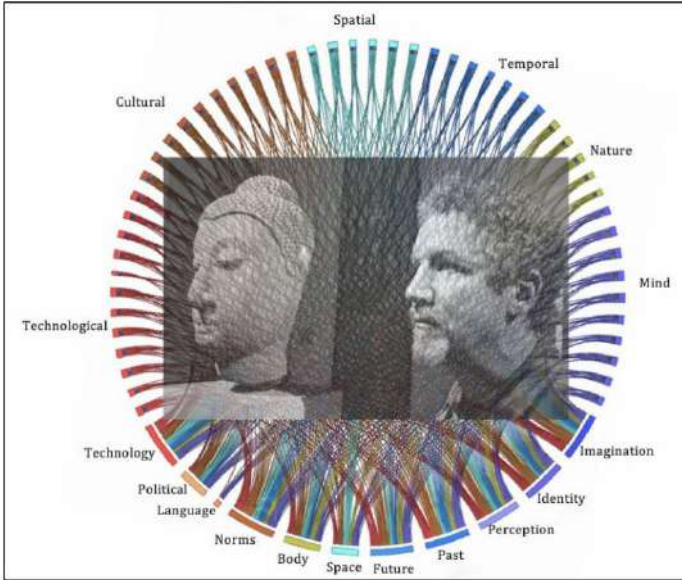
Fig. 6.6 *The Museum Selfie as a Complex Assemblage of Interrelations*. Image created using Circos. Image by author (2019), CC BY-NC 4.0.

Something similar could be added to the exercise above. For students, it would be an interesting task to creatively represent their own experience, something beyond the spreadsheet. This would allow them to engage with their experience in a more creative manner, giving them another chance to think about the complexity of relations that are involved when they engage with technology.

The benefit of the instrument developed in this chapter is how it can help us become aware by foregrounding the many relations that are occurring at any given moment. For media literacy, this allows us to better situate any media or media event that we are interested in investigating, interconnecting the event with the broad spectrum of constituting relations. The framework and instrument together can act as a facilitating cartography, helping to direct our inquiry both broadly and specifically in a posthuman approach.

Chapter Summary

7. Conclusion

The primary aim of this study was to create a way to situate and contextualize media literacy in order to better understand how we are affected by the ubiquitous media technologies that comprise our daily existence. This study first investigated the current state of media literacy and then took an interdisciplinary approach in order to leverage useful concepts from the fields of postphenomenology, media ecology, and philosophical posthumanism. The intent was to create a posthuman approach consisting of a framework and instrument that could be used by media literacy to facilitate our understanding of how the human subject is influenced by media technologies, thereby increasing our agency and helping us decide which media technologies we want in our lives.

This results in a facilitating cartography for both students and researchers to retain a broad perspective while investigating the unique relations that contribute to a subject's continual constitution as they move through their life. In this conclusion, I summarize my findings concerning how to expand media literacy. I then reflect on strengths and weaknesses of the study. I conclude with further recommendations for how the posthuman approach could be used outside of media literacy.

Summary of Main Findings

My main findings involve understanding how media literacy should be expanded to include a focus on the medium, as well as on the broader context within which media relations are situated. I found that it was

first necessary to clarify a contemporary understanding of what a human subject is and how it is continually being constituted through its relations. Following this, I developed the concept of an intrasubjective mediating framework and instrument that can then help us explore our use of specific media through identifying the interrelated constituting relations that are concurrently involved.

Expanding Media Literacy

The first main finding reveals that while media literacy is helpful in many of its various approaches, it in general has a couple limitations that could be improved in order to make it more effective in helping people understand the effects of our daily use of ICTs. The first limitation is that most media literacy approaches do not focus on the biases of the medium itself. Each communication medium—be it newspaper, television, or smartphone—has its own biases, enabling some things while constraining others. Making sure that the medium is included in media literacy investigations helps keep the focus from solely being on issues of content and representation (which are still important).

In addition, media literacy can benefit by including the broader environment within which the media use takes place. This is supported by the non-media-centric approach to media literacy advocated by Shaun Moores (2016) and David Morley (2007). This contextualizing move de-centers the focus on media and attends to the broader lifeworld where media happens. This is a critical component upon which I build, creating a practical approach that helps situate and identify the various relations that affect and are affected by our relations with specific media technologies.

The Human Becoming

In order to understand the effects of media literacy on the human subject, we need to have a contemporary understanding of the human subject, one that counters a traditionally humanist understanding of an idealized autonomous and standalone individual—a concept with roots in the eighteenth-century Enlightenment. Instead, we are relational, and it is through our relations that we are constituted. Rather than viewing

our selves as human *beings,* it is more appropriate to call our selves human *becomings.* We are in a state of constant becoming in a complex and sympoietic manner, evolving and transforming through the myriad of relations that are also constantly changing in our lives.

The concept of complexity is key to understanding the human becoming as it shifts the gestalt from an individual subject to a complex posthuman subject. We are always and already in relations, not only with other humans but also with technologies and the world. These relations are complex, situated, dynamic, and emergent. How these relations influence a subject continually changes, and the ability to bring one's awareness to a particular relation can affect the amount of influence the relation has.

Intrasubjective Mediation: Framework and Instrument

The key to creating a new framework in order to situate media literacy and the human becoming is to build upon postphenomenology's formula of technological mediation: I-technology-world. This helps us to (pragmatically) understand how we, as human subjects, are constituted through our relations. However, focusing only on technological relations limits our ability to understand and situate the broader relations that affect and are affected by media technologies. Therefore, in order to gain a more comprehensive understanding, we can include the other relations that are constituting our selves as well as influencing (enabling and constraining) the effects of the technological relations. This is where the intrasubjective mediating framework comes into play.

Intrasubjective mediation describes the process of how the transformations that occur to the human subject through technological, sociocultural, mind, body, time, and space relations mediate—and continue to mediate through time—how the subject perceives and engages with the world. Intrasubjective mediation enables the ability to understand how all of our relations continue to mediate our experiences with our lifeworld, creating a way to investigate both the current and continuing impact from relations. In the case of ICTs, this helps us to become more media literate by understanding their broader and ongoing effects.

The intrasubjective mediating framework and instrument is designed to enable a media user to better understand how media technologies are situated within a complexity of interrelations, all of which affect the user on an intrasubjective level. This framework and instrument provide a facilitating cartography for the human subject to become more aware through an autoethnographic process, guiding the investigator to analyze six groupings of relations. Additionally, the investigator then identifies and rates the effects of interrelations that influence the direct relations, leading to a clearer understanding of the complexity of interrelating factors that occur during any engagement with media. Through this broader understanding, the investigator enhances their own agency, empowering them to make better-informed choices concerning which media they invite into their lives.

Strengths and Weaknesses of the Study

Roger Silverstone (2006) points out, 'All concepts are metaphors. They stand in place of the world. And in so doing they mask as well as reveal it' (229). This holds true for the framework and instrument described in this book. On the one hand, the approach can help facilitate the investigation into identifying the interrelating effects of media technologies within the broader frame of all constituting relations. The approach has been designed with the media user in mind—either as a consumer, user, or producer of media. The goal of the approach is to enable a broader perspective on how we are—in part—constituted by the media technologies in our lives. However, it is impossible to identify all of the mediating relations that influence us. While the framework and instrument can help broaden our perspective, they can only facilitate our own inquiry into revealing a portion of the complexity of interrelations that affect us. And, attempting to create a comprehensive approach can give a person using it the false sense that they are actually being completely comprehensive. I first comment on the significance of the findings and then discuss some of their limitations.

Significance and Implications of Findings

These findings are significant because they provide media literacy a practical way for situating the effects of specific media use in a broader context, allowing for a more comprehensive understanding of the complexity and interrelationally of our media relations. The findings balance broad interdisciplinary theories concerning humans and technology and then connect them to a practical framework and instrument that can be used for media education. Not only are these findings based on solid, contemporary philosophical thought; they are also—most importantly—used to build a practical instrument for media literacy. I say importantly because while academic scholarship is often helpful for the academic world, in order to improve the everyday lives of people using media technologies, it is critical to do more than create academic theories. Through developing the theory into a usable instrument, there is an increased likelihood that there can be some positive effect on individuals and society. The framework and instrument are beneficial for researchers and educators of media literacy as well as users who engage with media.

Limitations of the Study

The limitations of this study stem, in part, from the intrasubjective framework and instrument not yet being fully tested. While I have used the intrasubjective framework and instrument to analyze a museum selfie, as well as using it with a small group of students, further application and field research is necessary in order to ascertain possible limitations and make further revisions.

How the instrument will work in other settings and contexts is still left to be seen. In addition, while I have validated many aspects through interaction with my peers (through discussions, papers, and conference presentations), I have not yet reached out to very many media literacy teachers and researchers who work in the field. I believe that further usability testing is necessary in order to generate feedback by students and instructors as they use the instrument to conduct their own investigations into specific media relations.

Critical Considerations

When should criticism enter into the dialogue? Throughout this book I have kept from focusing too much on how to critically evaluate our media relations. Before being able to pass judgement on a technology and its effects on our lives, I believe we should have a credible understanding of the complexity of the situated technology. This is what the posthuman approach supplies, allowing us to be in a better position for us to judge whether we should or should not invite specific technologies into our lives, and how we should engage with the technologies that are already in our lives. This critical assessment is absolutely necessary. It is also easier to accomplish on the personal/micro level rather than on a societal/macro level. However, it is the second part of the process, and the primary focus of this book is in exploring the first part.

Recommendations

In Chapter 6, I demonstrated how the framework could be employed to investigate and reveal the interrelations that I experienced taking a museum selfie. Additionally, I created a generic exercise that can be used for media literacy, which is now ready for media literacy instructors to experiment with. Up until now, I have been working mostly alone on the creation and implementation of the framework. This limits the likelihood of identifying what still needs improvement.

As indicated in the above section, the instrument will benefit through continued usability testing. I imagine students using it to conduct their own investigations into specific media relations. This will help revise the framework and instrument. As Paul Cilliers (2005: 259) states,

> There is no stepping outside of complexity (we are finite beings), thus there is no framework for frameworks. We choose our frameworks. This choice need not be arbitrary in any way, but it does mean that the status of the framework (and the framework itself) will have to be continually revised. Our knowledge of complex systems is always provisional.

I believe that continuing to use the framework and instrument with university undergraduates and graduate students who are studying media education and media literacy will be very beneficial. Graduate students in information literacy and the library sciences could also benefit

by experimenting with the instrument, both in order to understand their own media relations but also as a way to educate others about media literacy. Through continued studies with older students, potential issues can further be remedied before having educators modify the instrument in a manner that is tailored for younger students.

Another recommendation for the field of media literacy is a policy type of recommendation. In Chapter 2, I discussed several organizations focused on media literacy (such as the Center for Media Literacy, the National Association for Media Literacy Education, and the Association for Media Literacy in Canada). These are very helpful resources for media educators, and they all have their own unique approach to, and definition of, media literacy. My recommendation is for these organizations to incorporate more of a focus on the importance of understanding: 1) the biases of particular mediums; and 2) how the specific context and interrelations influence, and are influenced by, our relations with media. These recommendations allow media literacy organizations to retain the strength of focusing on media relations while also including the broader context, allowing for a more inclusive and situated understanding.

Extrapolating to Other Fields

Looking to the future, I wish to share my enthusiasm for the potential of using this posthuman approach for the broader fields of humanities and social sciences. The framework and instrument is a useful way to understand our selves as subjects who are continually being constituted through a complexity of interrelations. I believe that research in the various fields within the social sciences can benefit from leveraging the posthuman approach in order to situate and bring perspective to the specific research being conducted. I believe that it can even be used with a non-technological engagement. For example, using it to better understand one's experience marching in a political protest.

This approach provides perspective, which in turn helps us understand the interconnections and broader context of whatever research is being conducted. For instance, social science research focusing on the issue of race could use the framework in order to help situate the specific race relations, demonstrating how they affect and are affected by many of the other relations, all of which are interrelated

in a complex existence. This keeps researchers from being too narrow in their approach, and can help demonstrate how race importantly interrelates and affects other relations more broadly.

This posthuman approach is an effective first step toward a comprehensive situating framework. One of its strengths is in its interdisciplinary nature, having been created by bringing concepts together from different fields that have not necessarily interacted much previously. This cross-fertilization can now have benefits by introducing the approach back into some of the original fields of study. While the approach attempts to be inclusive and holistic, it is meant to be static. Both students and researchers in various disciplines can use it to investigate more deeply into any of the already defined groups and subgroups—or even create new groups and subgroups. To begin describing what this might look like, I will briefly explore how philosophical posthumanism, postphenomenology, and transhumanism might find the framework and instrument useful.

Philosophical Posthumanism

Posthumanism has an excellent, broad perspective, creating a post-anthropocentric, post-humanist, and post-binary outlook in order to understand the complex and emergent human subject. However, while posthumanism excels at keeping a broad perspective of what constitutes a posthuman subject, it is less clear exactly how to implement the posthuman concepts into an everyday living of one's lifeworld. Most helpful to posthumanism are the contributions in the field that implement the broader theoretical concepts into practical applications (for examples, see Adams & Thompson, 2016; Bayley, 2018). I believe that the intrasubjective mediating framework and instrument presented has the potential to be used in such a manner as practical tool for implementing posthumanist concepts relating to complexity as well as a non-humanist and a non-binary focus. The design of the framework leverages the broad concepts into a facilitating cartography that can be specifically applied to a broad range of research.

Postphenomenology

Postphenomenology's concept of technological mediation and the co-constitutionality of the I-technology-world formula is one of the main foundations upon which the framework and instrument are built. The framework can be useful in broadening postphenomenological research to include the other constituting groupings of relations. This inclusion helps keep postphenomenological research from being limited by its predominant focus on technology and allows the broader context of relations to also be addressed. Since the framework already uses many concepts from postphenomenology, it should be relatively easy to leverage it into the research within the field. This can also help the field address some of the criticisms that have been made against it in the past, specifically with regard to not incorporating cultural relations along with the technological relations (Scharff, 2006).

Transhumanism

While transhumanism is a forward-looking discipline, it is hampered by its foundation in rational humanist and Enlightenment concepts, dating back to the seventeenth and eighteenth centuries (Hughes, 2010a; More, 2013). As a discipline, it generally views the world and the human condition as complicated but solvable, allowing for an engineering approach to resolve many of humanity's issues. While its goals center on improving the human condition through contemporary and future technologies, transhumanism would benefit by taking a critical look into the philosophy it is built upon.

I argue that by leaving rational humanism (and the debate with bioconservatives) behind and incorporating intrasubjective mediation—with its foundation based on a complex, post-humanist subject—transhumanism has a better chance at positively improving not only the human species, but all living organisms on the planet. Therefore, I suggest that transhumanism evolve three of its perspectives: 1) the idea of a standalone individual to an interrelated and continually emergent subject; 2) the perception of human enhancement as complicated to understanding it as complex; and 3) a neutral view of technology to an understanding that technology is transformative and non-neutral. By changing transhumanist's theoretical foundation based in humanism to

a combination of posthumanism, postphenomenology, and complexity theory, transhumanism can become more contemporary and bring a more balanced and grounded expectation for the future of humans, technologies, and the world.

Non-Western Cultures

The scope of this research has remained embedded in the contemporary Western culture. However, as I conclude, it can be useful to think how this proposed posthuman approach might be used in non-Western cultures or to make comparisons between cultures. The framework is setup in such a way as to be useful in researching any culture, as well as being helpful in better understanding differences between cultures. For instance, some cultures might have a more developed sense of social interconnectedness, such as the idea of Ubuntu, which is roughly translated as I am because you are (Lief & Thompson, 2015). While much of this book has been focused on overcoming a strong sense of individuality that permeates much of the contemporary Western world, a culture based on the concept of Ubuntu can give rise to a vastly different lifeworld.

But rather than idealize or in some way *other* such a culture, the framework provides a way to look at the embedded and situated interrelations that exist within these cultures. We can use the framework to better understand what is enabled and what is constrained across all the various groupings of relations. The framework provides a cartography to bring the various relations and interrelations to the foreground of our awareness and to see on balance how all the groupings of relations co-exist.

Final Thoughts

While marketing departments spend a lot of money trying to convince us otherwise, there is no ideal technology that can do everything. Each enables some abilities while constraining others. Most ICTs, as technological objects, are closed systems. However, in their relations with humans they become a part of a complex living system. These complex systems and environments are emergent and dynamic, usually fairly stable in any one moment but dynamic over time.

The approach presented here allows a systematic analysis of the many influences happening in the moment one is engaged with a specific media technology. The approach also helps a media user to more clearly understand that they are immersed in, and part of, an interrelated environment. Changing any one relation can have wide ranging effects on the other relations.

One might ask the question, so what? My response is to point out that an increase in understanding—an increase in self-literacy—allows us to be more aware and better informed when we choose what ICT or technological medium we decide to engage with, thus helping us to regain agency with regard to all the relations within our lifeworld. To emulate John Culkin (1967), we shape our media environments and in turn our media environments shape us. Using this posthuman approach can help us more clearly understand the interplay of media relations in our lives, allowing us the chance to shape them to our best advantage.

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About the Team

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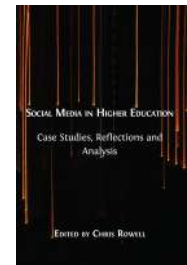**Digital Technology and the Practices of Humanities Research**

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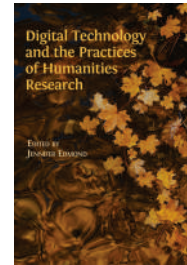
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Technology, Media Literacy, and the Human Subject

A Posthuman Approach

Richard S. Lewis

Media literacy is often focused on evaluating the message rather than reflecting on the medium. Bringing together postphenomenology, media ecology, posthumanism, and complexity theory, Richard Lewis offers a method for such a reflection and shows how our everyday media environments constitute us as (post)human subjects, always in a state of becoming. An original interdisciplinary effort and a must-read for everyone interested in how we become with and through technologies.

Prof. Mark Coeckelbergh, University of Vienna

We are mediated by and immersed in a world where information and communication technologies (ICTs) are undergoing accelerated innovation. From hardware like smartphones, smartwatches, and home assistants to software like Facebook, Instagram, Twitter, and Snapchat, our lives have become inextricably entwined with a complex, interconnected network of relations. Scholarship on media literacy has tended to focus on developing the skills to access, analyze, evaluate, and create media messages without considering or weighing the impact of the technological medium and the broader context.

What does it mean to be media literate in today's world? How are we transformed by the many media infrastructures around us?

These issues are addressed through the creation of a transdisciplinary approach that allows for both practical and theoretical analyses of media investigations. The author proposes a framework and a pragmatic instrument for understanding the multiplicity of relations that all contribute to how we affect—and are affected by—our relations with media technology. The increased awareness provided by this posthuman approach affords us a greater chance for reclaiming some of our agency by providing a sound foundation upon which we can then judge our media relations.

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