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## Working Paper Series

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### **Cosmopolitan Intimacy and Filter Bubbles**

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**School of Media, Film and Journalism**

2017



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# Introduction

In this paper I ground my recent theoretical investigation of social media and intimacy in the concerns of the new Culture, Media, Economy research unit at Monash University. I connect my central interests in media technology, intimacy and ethics with the research unit's emerging focus on political economy, cities and cultural production. In particular, I explore how social media filter bubbles influence intimacy and cosmopolitanism. Filter bubbles are algorithms that filter and rank the information a user receives about his or her online social connections. My argument has three stages. First, I explore how filter bubbles raise the possibility of cosmopolitan intimacy as a mode of being together in a complex and conflicted global society. Second, I suggest that this requires an ethics of what it means to live in intimate bubbles surrounded by cosmopolitan possibilities. What role should algorithms play in *immunising* these spheres? Finally, I argue that such an ethics involves an immanent critique, one that does not abandon bubble life, but seeks to imagine alternative bubbles. At this point a host of empirical and practical possibilities open up around the research and design of media and space that are hopefully of interest to my colleagues and collaborators within and around the Culture, Media, Economy unit.

This reformulation of filter bubble discourse is now more pertinent than ever. With Middle-Eastern conflict producing surges of migration into Europe, with nationalist political movements returning to prominence, and with various forms of cyber-hate flourishing online, the question of the possibility of a cosmopolitan politics has never been more forceful. But if cosmopolitanism involves an openness to the stranger, how can we be cosmopolitan when our communicative systems cocoon us within bubbles?

I argue that the social quality of these bubbles can best be understood through the concept of intimacy. Intimacy is a shifting and elusive term, used differently by various cultures and in different historical periods to explain aspects of social life.<sup>1</sup> Sociological research around contemporary ideologies of intimacy suggests that, in the European and Anglophone world, the term has come to refer to a range of relationship, including family, friends, and lovers (Allan, 2008). Despite evidence that these relationships are becoming more fraught with personal risk (U Beck & Beck-Gernsheim, 2002), an aspirational ideology has emerged that views intimacy as involving care for others whom one shares a close emotional relationship (Jamieson, 1998). I argue that awareness of what is happening in the lives of these others tends to be amplified by filter bubble algorithms, thus recursively reproducing the boundaries of intimate spheres. And yet, social media also enable connections with diverse groups. These networks are inflected by the increasing mobility that is forced upon people by globalising forces and can often be quite multicultural. Thus we find intimate bubbles surrounded by cosmopolitan possibilities, a situation that figuratively resembles the house surrounded by the city. If these bubbles could expand and augment themselves we would encounter something highly significant: *cosmopolitan intimacy*. In this paper I explore the contradictory and dialectical nature of this concept.

Eli Pariser (2011) was one of the first authors to draw attention to the ideological and political consequences of personalisation algorithms that prevent people from entering the pluralised public spheres necessary for democracy to flourish. But Pariser and similar thinkers almost always interrogate filter bubbles from a political or journalistic perspective, and usually one which is

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<sup>1</sup> Despite this contingency, we have yet to see a truly genealogical critique of intimacy, although potentially related concepts like sexuality have been given such a treatment (Foucault, 1978). Unfortunately, there is no space here to unpack the question 'whither intimacy after post-structuralism'?

confined within liberal or deliberative norms of democratic participation and journalistic duty (Bozdag & van den Hoven, 2015). The concepts and debates associated with intimacy and cosmopolitanism are largely ignored. Yet, given that social media tempt us with the possibility of cosmopolitan intimacy, these debates must be brought to bear. With this in mind, my approach resonates with Derrida's insights in *The Politics of Friendship* (1997b) and *On Cosmopolitanism and Forgiveness* (2002). In these texts Derrida seeks a cosmopolitan ethic that is grounded in the intimate – in voluntary friendships – rather than Kant's cosmopolitan imperatives and the politics of liberal democratic citizenship.

In the following section I explain in more detail the ways in which digital sociality, intimacy and cosmopolitanism are related. I then search for an immanent ethic of filter bubbles through a critical reading of the work of Peter Sloterdijk, aided by the more progressive vision of Donna Haraway. I go on to justify why an immanent critique is necessary. Since Socrates chastised Phaedrus for contemplating the written word for recording intimate orations, there have always been commentators who seek to transcend mediatic forms of life. But abandoning media technics is today a naïve philosophy. Through an unorthodox reading of Niklas Luhmann's systems theory, I argue that filter bubbles are now inescapably necessary. At this point I shift into a prescriptive gear. One must take aim at the underlying rational that governs these bubbles: the politics of platforms.<sup>2</sup> One must also produce a consciousness that understands this politics and is driven by both intimate and cosmopolitan impulses. Remaining immanent, one must experiment with alternative bubbles that make the non-intimate visible and sociable. Aligning with the concerns of the Culture, Media, Economy research unit, I point to media design, art spaces and urban policy as a way of achieving this.

## **Cosmopolitan Intimacy and Digital Sociality**

The Stoics sort a universal humanity that exceeded the boundaries of the Greek city state. Their project was multifaceted: they imagined a common capacity for love, aesthetics and reason; they advocated an outward and open minded curiosity toward others; and they were sceptical toward hierarchies of cultural value (Papastergiadis, 2012). Kant (1957) refashioned stoic cosmopolitanism, grounding it in his idealist and teleological interpretation of history. Cosmopolitanism as a 'universal civic society' is born out of the *need* for human beings to resolve our natural antagonism between the desire for individual 'brutish freedom' and the safety and cultural advances offered by cooperating socially. We achieve this through our natural capacity for reason, which in an Aristotelean sense directs itself naturally to this end. This process is reproduced at the level of interstate relations, with Kant superimposing the reason of the individual on that of the state. He thus argues that a league of nations will naturally come about to secure the safety and development of each state and its constituents. In doing so, Kant restores the importance of national borders, arguing that cosmopolitan encounters need to be regulated by the legal power of states and interstate treaties. As Derrida (2002) points out, Kant places conditions on cosmopolitanism in terms of the right to State citizenship, making it acceptable for strangers to visit, but not stay.

Since Kant there has been debate over how cosmopolitanism can be meaningfully practiced politically. As Mica Nava () points out, discourse on cosmopolitanism has proliferated dramatically in recent decades and critical questions abound. What form of political consciousness is required? What form of global governance (Held, 2010)? How can we be open to strangers given the realities of our globalised, refugee and immigration-based world (Appiah, 2006)? Are there universal moral principles that can

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<sup>2</sup> Tarleton Gillespie (2010) has made this term famous in his analysis of the way platforms shape public discourse and regulatory policy. I use it to refer to the political-economic analysis of social media platforms more generally.

guide us, or are these universals actualised through encounters with others in a more postmodern, constructivist sense (Mignolo, 1998)? How can we interpret cosmopolitanism through the lens of other central political debates around issues such as gender, sexuality, and race (Nava)? To this I would of course add issues around intimacy and technology that have emerged in the age of social media.

David (2009: 87-88) argues that Kant's prioritisation of the nation state has become untenable given the existence of diasporic communities who hold multiple citizenships and cultural allegiances. These realities, as well as the proliferation of global media, encourage a trans-national sensitivity to cross-cultural flows. Arjun Appadurai (1990) famously argues that we do not live in culturally 'pure' spaces, but culturally heterogeneous 'scapes'. He suggests that this cultural plurality provides the opportunity for cosmopolitan sociality. I am more sceptical. It does not necessarily follow that an intimate social group who identifies with different cultural texts and practices will have the opportunity to make social connections in different cultural domains. And even if they could, would they be able to form long lasting and caring relationships with these connections? Bauman (1995) relates this problem to our encounters with strangers in cities. The intermingling of strangers gives the illusion of a socially cohesive, multicultural community. Yet in reality the stranger is 'Janus faced', with one face providing an exhilarating spectacle of difference, and another provoking fear and the desire to retreat back into the safety of the intimate home. This is one of the contradictions of cosmopolitan intimacy: the dialectic between cultural plurality and real social plurality.

Given the rhetoric of unencumbered social networking associated with the Internet, one would think that cosmopolitan social opportunities are finally at hand. Submerge yourself below the tides of online words and images and you will discover the Internet's dynamic topography. William E. Connolly (2000) argues that this rhizomatic structure is capable of cross-cutting concentric spheres of belonging such as neighbourhoods or nation-states, enabling trans-national forms of cosmopolitan sociality. Connolly does an excellent job of illustrating the potential of rhizomatic networks, but leaves one searching for examples of these seeds coming to fruition. Even if one places cultural and political issues to one side, there are digital divides of various kinds that place limits on a person's capacity to navigate flights through the rhizome. Connolly also ignores what Alexander Galloway (2004) calls the 'protological power' of networks: the way in which computer programming governs network connections and hence comes to regulate social relationships. This analysis of the politics of code becomes particularly important when considering filter bubbles.

Now resurface and examine the discursive layers of the Internet. In the first decade of the World Wide Web, utopian commentators saw anonymous cyberspace as a milieu in which difference could be suspended, affording truly open and equitable encounters (Bruckman, 1992). At the turn of the millennium these ideas were firmly debunked (Nakamura, 2002). These days it does not take much effort to find online conflict routed in visible difference. Witness the cyber-hate of online bullies, trolls, doxers, extremists and so forth (Cytron, 2014).

Interestingly, few studies explicitly interrogate the relationship between social media and cosmopolitanism. A rich repertoire of ethnographic work looks at how particular cultures appropriate social media (see Miller et al., 2016). Yet these projects mostly explore how groups sustain their local characters and intimacies given the realities of trans-national mobility (Madianou & Miller, 2011). When social media were barely germinating, American scholars obsessed over whether these media could facilitate the accumulation of what Robert Putnam (2000) calls 'bridging social capital': social resources claimed from weak ties in heterogeneous networks (Ellison et al., 2007). Furnished with the usual psychometric Likert scales, much of this research perpetuates the instrumental and narcissistic

rationality that users seek efficient self-betterment in line with dominant neo-liberal aspirations.<sup>3</sup> The cosmopolitan question of a curiosity toward the stranger is mostly ignored.

Social media research has, however, made important strides in understanding the central importance of intimacy for social life on many of these platforms (Hjorth & Lim, 2012; Lambert, 2013). Intimacy seems to be the gravity that holds online social networks together and the light that gives them meaning. Based on an ethnography of people living in Melbourne, I have argued that some Facebook users connect with a heterogeneous group of social ties drawn from different places and times in their mobile biographies (Lambert, 2013). However, the politics of online public intimacy comes to regulate whether these more diverse connections are meaningfully engaged. Distant social ties are unlikely to spark up a conversation unless there is a visible 'trigger': a signifier of common interest or shared history. Moreover, intimate ties can symbolically exclude others when they perform their intimacy publically.<sup>4</sup> This is a critical aspect of Bourdieu's (1986) 'forms of capital' that most social media scholarship underestimates: social groups reproduce their social and cultural boundaries through public visibility, through an aesthetics of difference.

Thus, online 'networked publics' are similar to offline public spaces in that signs of intimacy and antagonism can prevent cosmopolitan interactions, even if rhizomatic vectors are made available. These visible exchanges of in and out-group membership are not all powerful. Networks are still heterogeneous and rich enough to hold the potential for encounters with the non-intimate, even if these are rarer or more perfunctory than we would like. Yet the addition of filter bubbles that limit the social connections we encounter only makes this less likely.

There are filter bubbles everywhere online, from Google searches to Amazon recommendations. A variety of popular social media have also started to introduce personalisation algorithms. Twitter has its Timeline, WeChat its Moments, Instagram its Feed. Snapchat is set to introduce something equivalent shortly.<sup>5</sup> The paradigmatic social media filter bubble is Facebook's News Feed, which began in 2009 and has since had multiple sophisticated upgrades. In what must be called a public relations failure, Facebook's internal sociologists even produced their own infamously debunked research on whether their algorithm produces the ideological polarisation Pariser and others have described (Bakshy et al., 2015).<sup>6</sup> A host of thinkers have also explored algorithmic sorting in relation to physical space. Steven Graham (2005) discusses the role of software and surveillance in sorting how people move through cities, producing what could be called urban filter bubbles. Similarly, Lee Humphrey's (2007) has critiqued location-based networking as creating 'homophilic' spaces in which one is more likely to encounter someone similar to oneself.

The circuitry of these algorithms can be simplified to a basic feedback between user data as output and curated content as input. The algorithms 'choose' content based on what most platforms – adopting the nomenclature of the free market – call 'ranking signals'. For example, Facebook's News Feed uses a sophisticated machine learning algorithm to learn what types of content individual users prefer so as to rank this higher in their news feeds. For example, a user who clicks on more photos will see more photos in his or her feed. Facebook also takes into account thousands of other signals, one of the most salient being how close two people are based on how often they interact. Assumptions about intimacy are recursively performed on the level of code. Facebook also has a team of human rankers who make accuracy tests on the algorithm, and a team of engineers who constantly experiment with a

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<sup>3</sup> I have elsewhere critiqued this work for its lack of criticality and its psychometric orientation (see Lambert, 2015).

<sup>4</sup> This is what Aldrich (2012), in a long needed correction to over-enthusiastic, impact-oriented literature, calls social capital's 'Janus-faced' quality.

<sup>6</sup> The study was quickly eviscerated by a host of social media scholars for being non-representative, dishonest about the role of the algorithm in ranking stories (Sandvig, 2015) and naïve about the deeper way in which algorithms discipline user habits (Pariser, 2015).

small percent of users. The aim of all this is to anticipate what users are interested in and to consequently boost advertising 'click through' rates.

These algorithms *curate* information about social relationships to produce *situation awareness* about one's social life.<sup>7</sup> What are people doing? What are they saying? Where, when and with who? Through their recursive feedbacks, the algorithms create a reliable sense of one's social reality through an almost ritualistic repetition of familiar situations. In this way they reduce uncertainty and establish what Giddens (1991) would call ontological security. There has been a shift from an earlier period in which social media scholarship was primarily concerned with the collapse of social situations (boyd, 2011), often framed in terms of Goffman's 'front' and 'back stages' (Goffman, 1959). Because such a collapse is never intended, it has the phenomenology of the accident or the surprise. However, curatorial algorithms produce dependable forms of situational awareness that reduce the chance of surprise. Theoretically, then, we must move beyond the Goffmanian dilemma. This popular dialectic of front and back stage must be placed within a new context, as must the hegemonic opposition between public and private. Filter bubbles are in fact curations of public information, or what Tarleton Gillespie (2014) calls 'calculated publics'.<sup>8</sup> The dominant dialectic now becomes the opposition between the inside and the outside of a bubble.

This predicament has primarily been explored through political and journalistic optics. What does being in a filter bubble mean for an informed citizenry? What happens to the role of the fourth estate when algorithms become gatekeepers and editorialisers? When the public sphere shrinks to the size of a personal bubble, can media serve the public interest? If ideologies are recursively reaffirmed at such a fundamental layer of communicative infrastructure, can propaganda and bias ever be challenged?

While I believe these to be essential questions, I want to frame the problem of algorithmic sociality in terms of intimacy and cosmopolitanism. This is not to say that these concepts evade the political. I believe they help to clarify and extend some of the political questions just mentioned. However, I also believe that thinking through the concept of intimacy provides insights that narrower political frameworks cannot. Derrida (1997b) uses the intimacy-related concept of friendship to think beyond the Kantian politics of cosmopolitanism. Within the Kantian framework there are always conditions on cosmopolitan hospitality. Derrida seductively suggests that friendship can suspend those conditions, although he never clearly articulates how.<sup>9</sup> However, one can imagine that through the affective ecstasy of an encounter that is charged with the potential for friendship and intimacy, the stranger's otherness is recast in ways which cannot be reduced to the politics of borders and boundaries. Just how such a cosmopolitan intimacy can be primed is the central hanging question in Derrida's key texts on the issue, and one which returns with hungry significance when we consider social media filter bubbles.

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<sup>7</sup> The term situation awareness is often used by intelligence agencies, law enforcement, military and emergency management. My use of it is strategic in that these different organizational contexts have converged with social media as part of a global sensor-surveillance system. For example, the algorithms used in Google's maps and social media platforms to produce social situation awareness are the same algorithms used in crisis mapping tools.

<sup>8</sup> Gillespie emphasises the way in which users become habituated in these domains and non-critical of their logics. This is partly confirmed by a study conducted by Eslami and colleagues (2015) on 40 Facebook users, 62.5% of whom were not aware their News Feed stories were being filtered.

<sup>9</sup> Although Derrida hesitates when it comes to articulating the kind of friendship processes which may take place in a 'democracy to come', they cannot be the exclusive and inequitable forms of phallogocentric fraternity which he deconstructs as part of the 'canonical' concept of friendship. Hence, cosmopolitan intimacy must be what Giddens (1992) would call a 'detraditionalised' or 'plastic' form of intimacy.

## The Ethics of Immunised Spheres

Despite the problems that filter bubbles produce, I argue that cosmopolitan intimacies cannot be achieved by abandoning these bubbles, as if abandoning them was possible. A cosmopolitan critique of the filter bubble must begin with a new ethical imaginary immanent to the filter bubble itself. For this purpose I turn to a philosopher who had already articulated the logic of filter bubbles long before Eli Pariser wrote his book or Mark Zuckerberg wrote the first line of Facebook code: Peter Sloterdijk.

In Sloterdijk's work we find a theory of immunised spheres and an attendant media theory of immune systems. It is worth noting that he is not alone in his deference to this metaphor. Immunity has a powerful historical and biopolitical resonance in today's world. Nikolas Rose (2007) has been one of the foremost critical thinkers of the biopolitics of disease, the way in which it enables forms of self-understanding and governance, and the way it structures unequal access to treatment. In the wake of the 1980s AIDS crisis, Emily Martin (1994) explored how disease sufferers encountered a transformation in the therapeutic biopolitics of immunity, one that normatively legitimates those with more 'flexible' and 'adaptive' immune systems. Donna Haraway argues that the immune system has become an 'elaborate icon for principal systems of symbolic and material 'difference' in late capitalism' (Haraway, 1991a: 204). She finds immune metaphors in science, technology, photography, military strategy, and business.

In a world of ubiquitous sensors, surveillance and data it is not difficult to find traces of immunological metaphors. The immunisation of communication resonates with the notion 'viral media' (Nahon & Hemsley, 2013) and can be considered a consequence of networks that enable rhizomatic data flows (Galloway & Thacker, 2007). Interestingly, we are now seeing the point at which these system metaphors and system ontologies are converging. Hewlett Packard have introduced a project called CeNSE – a worldwide nano-sensor integrated surveillance network aimed at detecting airborne viruses.<sup>10</sup> This must be one of the most provocative material-discursive extensions of the cybernetic body into a mediated atmosphere we have yet witnessed.

Out of all these approaches, Sloterdijk's is perhaps most useful for diagnosing the online sociality I am concerned with. In his *Sphären* trilogy, Sloterdijk articulates a philosophy of shared existential interiority within the sublime vital, social and metaphysical geometry of the sphere. Based on a broad exploration of philosophy, history, art, religion, and psychotherapy, Sloterdijk (2011) argues for the psycho-developmental primacy of the womb-sphere – in which intimate mediations are first established – and for postnatal echoes of this primal form in small communes.

Spheres are sustained via three fascinating concepts that Sloterdijk commonly refers to as animation, immunisation, and atmosphere. Spheres are animated by a guardian being that is both immanent and transcendent to the sphere. In the 'biune' sphere of the womb the mother animates the foetus. Beyond the womb, spirits and gods animate ethno-religious tribes and premodern civilisations. Sloterdijk often celebrates the higher power of the animator, and gives little thought to the gender politics associated with either the mother or the patriarchal religious figures that gratify the weaker agent's submissiveness. Connecting mother and foetus, or God and man, is an ambiguous mediating entity that is first incarnated as the placenta. This organ mediates the mother and child through a 'blood communion', and provides an intrauterine immune system for the womb-sphere that protects and nourishes both parties. Here Sloterdijk constructs immunisation as both mediation and security. As both the possibility of sociality and of its limits. Immune systems are morphologically dynamic in their ontological and epistemological forms. They are placentas, angels, geniuses, city walls, modern forms of architecture and air-conditioning systems (Sloterdijk, 2014). These come to regulate a sphere's internal atmosphere. An atmosphere can take the form of a resonating interplay of affects between

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<sup>10</sup> HP® Official Site. (2016). *CeNSE*. Retrieved 24 August 2016, from <http://www8.hp.com/us/en/hp-information/environment/cense.html#.V74lRJP5hE5>

people, places and objects. Sloterdijk also takes the existential priority of air very seriously, and correctly identifies modernity as the period in which air quality has been catastrophically technologised (Sloterdijk, 2009).

Within this treatment of spheres is a corollary theory of the subject. In arguing for the existential primacy of being in a shared sphere, Sloterdijk also argues against an *a-priori* loneliness and for a socially ecstatic form of being. This is most evident in his refreshing reinterpretation of passages from *Being and Time*, in which Heidegger argues that Dasein has a way of being which he calls 'de-severance': a way of going 'yonder', procuring something and returning (2011: 339-340). This is possible only because of Dasein's essential openness to the world. Sloterdijk argues that what Dasein is actually procuring is another agent, and hence augmenting a social sphere. This is first evinced in the foetus' openness to sound resonance and the mother's voice. It is later evident in the individual's openness to the sacred communications of gods and angels, somnambulists, psychotherapists and the gazes of others. These ecstatic animations are enabled by immune systems, which mediate these encounters.

Importantly, Sloterdijk must accommodate his romantic urge to conceptualise the intensity of an intimate encounter. True to the metaphor, he conceives of moments in which immune systems succumb to 'erotic toxemia' and 'affective infections' (2011: 139, 207). Infection overcomes immunity. For the subject to be a subject he or she must be intimate. Yet to be intimate a sphere's immunities must, if just for a moment, fail.

Sloterdijk does not believe that small communal bubbles are capable of expanding to form cosmopolitan, multicultural spheres. Spheres only maintain their shape when their members share a high degree of similarity: a common, ethno-religious animating force. In as much as intimacy begins with an infection, it is always a contained infection within a broader homogeneous space. Thus, the admittance of radical difference constitutes an existential threat for spheres. This is what is most concerning about Sloterdijk's work when considering the realities of globalisation. It comes as no surprise that Sloterdijk is highly critical of contemporary global forces. He views the mobility of people, capital and communication as a foam-like vortex of non-round spheres that lack the capacity to join into coherent collectives. Echoing the modern nostalgia for tradition, and the post-modern eulogy for grand narratives, he laments the end of theological and ethnocentric forces that can animate spheres with meaning, identity and agency. He critiques global markets for imposing forms of standardised consumption that compromise the immune defences of local spheres and negate the character of local cultures (Sloterdijk, 2013). Global markets, caballed with certain philosophers and psychologists, also produce a form of bland individualism. Here, media systems are particularly complicit. Sloterdijk observes the move away from what he considers to be the totalitarianism of mass media to the nihilism of personal media, typified by Warhole's tape recorder (Sloterdijk, 2011: 407).<sup>11</sup>

In such a situation dialogue becomes impossible and rage inevitably inflects all encounters with difference (Sloterdijk, 2010). Terror comes to replace politics, and through chemical, biological and nuclear weapons, terror destroys the very atmospheres which enable sphere-life (Sloterdijk, 2009). While Sloterdijk is careful to avoid taking these arguments to their blunt conclusions in his philosophical work, in his interviews he has advocated the dismantling of welfare, the detaining of refugees, and the destruction of Islam, which in his view constitutes the greatest counter-threat to the German-centric, *thymos*-imbued spheres he nostalgically seeks to protect (Sloterdijk, 2016).<sup>12</sup>

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<sup>11</sup> Sloterdijk associates the tape recorder with a critique of the mirror. The mirror is a form of mediation that enables a form of self-realisation in which an intimate other can be excluded. In this sense Sloterdijk echoes Ursula Frohn's (2002) materialist critique of camera-media as a means of surveillance that solicits narcissism, which she traces from Warhole's *Screen Tests* to the reality TV show *Big Brother*. Similar critiques are also levied against social media (see Rosen, 2007).

<sup>12</sup> I must thank Nikos Papastergiadis for his invaluable help in articulating this critique of Sloterdijk.

Undergirding these propositions is the desire to retreat into national, ethnic, religious or class-based spheres. Interestingly, what separates Sloterdijk from Heidegger – an obvious predecessor in the regard – is that he does not view technology as antithetical to such a ‘homecoming’. He views spheres as essentially technical, and is happy to embrace sophisticated forms of ‘anthropo-technology’ such as genomics as long as they can reproduce life in bubbles. Perhaps, then, Sloterdijk would embrace the anti-cosmopolitan effects of social media filter bubbles (in their less individualised forms) and declare them an effective form of socio-technical immune system.

Ultimately Sloterdijk’s work is anathema to any project that is guided by an ethical commitment to cosmopolitanism. Yet the conceptual vocabulary he provides is, I argue, invaluable for articulating some of the key issues that filter bubbles produce. I want to adopt Sloterdijk’s spheres while making them porous to mobility, enriched by difference, and capable of hospitality. I want to retain an idea of the ecstatic subject, while radically extending his or her openness to the world and to others. I support the primacy of an intimate relation, but wish to expand the boundaries of this intimacy. Nevertheless, I do not want to naively ignore the fact that human beings do require security. For these theoretical moves to take place, the orientation of immunity and its relationship to infection must be reconceptualised. Infection retains its positive meaning, but no longer just applies to connections that occur within a homogenous space. Infection refers to the encounter with difference, and to the consequent diversification of the interiority of a sphere. The deconstruction of the immune sphere recasts infection as the possibility of cosmopolitan intimacies.

This deconstruction has yet to really occur in relation to technology, intimacy and cosmopolitanism. Yet Donna Haraway’s (1991a) work gestures towards the basic structure of such a theory. Haraway performs readings of various sites of techno-scientific immune discourse, revealing the way in which immune science set out to discover how the self was able to perpetuate its boundaries, only to find that these boundaries are biologically, technologically and discursively blurred. Reflecting on the scientific state-of-the art, she writes:

The genetics of the immune system’s cells, with their high rates of somatic mutation and gene product splicings and rearrangings to make finished surface receptors and antibodies, makes a mockery of the notion of a constant genome even within ‘one’ body. The hierarchical body of old has given way to a network-body of truly amazing complexity and specificity (1991a: 218).

For Haraway, it is only after such developments in the science of immunology that the immunological metaphor can inform our ethics of plural ways of being. This resonates with her mosaic image of the cyborg, a being constituted by difference, who could only be imagined after cybernetic science used the reductive concept of information to remove the ontological boundaries between nature, culture and technology (Haraway, 1991b).<sup>13</sup>

Haraway is happy to embrace the notion of an immune system as a networked communication system. However, she critiques the militaristic semantics of defence and invasion which advance from immune science into war and business. In this regime, infection is a breakdown of defensive communication, a pathology of information misrecognition. Based on Winograd and Flores’ postmodern analysis of computation, Haraway engaged with an alternative model of the immune system based on ‘constraint and possibility for engaging with a world full of “difference”, replete with non-self’ (1991b: 214). Infection is recast in terms of Winograd and Flores’ concept of ‘breakdown’: as an opening of the self to ‘a situation of non-obviousness’ and hence new understandings (ibid). Haraway is thus more than aware of the antagonistic and colonial ventures that come from a ‘fully

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<sup>13</sup> Haraway also offers a more dystopian possibility for the cyborg: a person who is subject to militaristic and corporate control and to unequal access to technological forms of liberation, such as immunological bio-technology.

defended' self. Embracing a cosmopolitan and progressive idea of infection, she asks: 'As cyborgs in this field of meanings, how can we, late-twentieth century Westerners, image our vulnerability as a window on to life?' (1991b: 225).

Haraway's recasting of immunity, infection and vulnerability is positively progressive and empathetic when compared with Sloterdijk's. Unfortunately, Sloterdijk's immune systems seem to be business as usual. What is a filter bubble if not an immunised sphere? In such a code-sphere, at its idealised level of effectiveness, nothing exterior is revealed.<sup>14</sup> The stranger – in all his or her theorised forms – remains strange. To deconstruct this worrying dystopia is to fulfil the important duty of imagining alternative forms of sphere life.

## Complexity and Curation

But why must we deconstructively reimagine the ethics of sphere life and hope for alternative immune systems? This question suggests the possibility of a transcendental critique, the dream of abandoning out current mediatic forms of life. An easy response to this is that filter bubbles have long occurred in the offline world as well: through ideology; through class structures; through architecture and urban planning; or through other assemblages of power. In Sloterdijk's language these are morphologies of the sphere. In this section I argue that we must consider immanent critiques because filter bubbles are now an inescapable part of everyday life for those of us who live that life partially online. Once sociality is integrated into a global communications system that is characterised by extreme complexity, that sociality will inevitably succumb to systems of communication based on selective curation. Complexity is meaningless. Faced with meaninglessness we are forced to embrace curation. Complexity is constant, rapid, voluminous and ubiquitous. Faced with this we are forced to embrace computational automation.

To make this argument I turn to the idiosyncratic system theory of Niklas Luhmann. Dedicated to grand theory building, Luhmann develops a theory of society based on complexity, differentiation and evolution (Luhmann, 1995). His theory is applicable to natural, psychic and social system, as well as their relationships. One of his most original moves is to argue that each system is autopoietic. That is, operationally closed to other systems. While systems may select and utilise resources of various kinds from an environment of other systems, they do not share their operation with any of these other systems. For example, communication is the operation that defines social systems. Communication utilises the biological operations of human bodies, and the psychic operations of human minds, yet communication itself is not functionally equivalent to these operations. A striking consequence of this is that human beings are not operationally part of society, but are instead part of society's environment.<sup>15</sup>

Autopoietic operations are self-reproductive, and are only capable of producing connections with themselves. They also inherently differentiate themselves from their environment. Thus, they have a form that is both self-referential and environment-referential (Luhmann, 2006). For example, each communication results from and hence references a prior communication. In doing so it differentiates

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<sup>14</sup> 'Code-sphere' resembles the term 'code/space', coined by Dodge and Kitchen (2011). There is a conceptual similarity in that code spaces are autogenous and cannot be resisted or transformed without being negated. 'Coded spaces', on the other hand, enable resistance and transformation by virtue of their non-dependence on code for the functionality of the space. Though Dodge and Kitchen never put it this way, code/spaces are in a sense anti-cosmopolitan.

<sup>15</sup> Interestingly, this theory enables a greater clarity in understanding the way in which communication as a system of signs has the capacity for what Derrida (1997a) calls *différance*: an temporal excess of meaning that evades the presence of the subject.

itself from non-communicative operations. Nevertheless, the infrastructure used for a communication will select from some aspect of a physical environment and the meaning it contains will reference some aspect of the phenomenal world.

For Luhmann, environments are inherently contingent and complex. When a system emerges it produces structures that have a comparatively reduced complexity. Social systems communicate meaning, and emerge in response to the need for human societies to cope with the complexity of their environments by making *meaningful observations* of these environments. However, systems often evolve toward more complexity causing functional differentiations to occur within them. Luhmann argues that global modernity has produced a world society of incredible complexity, requiring the emergence of differentiated communication systems with distinct technical operations and media forms (Luhmann, 2012). In as much as each differentiation is an attempt to make meaning out of this complexity, the rapidity of modern innovations in communication and organisation is a consequence of a society that is in a kind of epistemological crisis.

This process is clearly evident in the evolution of the Internet, which constitutes a 'layering' of forms of protocological control (Galloway, 2004) with each layer being a functionally differentiated system produced out of the need for meaningful communications in an increasingly complex global society. Hence the Domain Name System is functionally differentiated and layered on top of the TCP/IP system. On top of the Domain Name System is the system of APIs that enable communication between platforms. Meanwhile new Internet Protocol systems have developed to accommodate convergent video and voice communication, mobile media and the Internet of Things. Finally, to make meaning out of the complex deluge of data that is produced out of these systems there is a need for the algorithmic filtration of information: for filter bubbles.

Keeping with Luhmann's theory, what is the autopoietic operation of these filter bubbles? They operate, as I have already suggested, according to the logic of *curatorial communication*. They select information from one-to-one, one-to-many, and many-to-many forms of communication and curate this information for a person or organisation to produce a sense of situation awareness. In the case of social media, filter bubbles curate communication to produce ego-centric situational awareness. This elicits a response from users, creating a feedback that produces further forms of curation, hence enabling the autopoietic self-referentiality of the system.

In his later work Luhmann (2012) puts more emphasis on the way in which systems 'irritate' one another, producing a more intense and dynamic form of co-dependence, or 'structural coupling'.<sup>16</sup> Consider the human psychic system's coupling with the complexity of the Internet. Literature has drawn attention to the stresses placed on human cognitive load by the speed of online information retrieval, the ephemerality of hypertext, the compressed nature of online messages, and the bleeding of different social contexts and senses of social presence into one another (Gregg, 2011; Hassan, 2012). As Richardson and Wilken (2013) argue, the modern mobile internet user is in a constant practice of negotiating the techno-somatic entanglements of emplacement, embodiment and cyberspace. This transforms the way in which we are attentive to things. It transforms our situational awareness and memory. Bernard Stiegler (2013) explores this using Husserl's concepts of primary and secondary retention.<sup>17</sup> In this schema, a person's capacity to transform short-term into long-term memories comes to be regulated by the way the Internet affords forms of communicative repetition. Social media 'grammatise the self' according to the way their systems enable the repetition of

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<sup>16</sup> While Luhmann has certainly been critiqued for being a system determinist who leaves little place for the human agent (see Bleicher 1982), he is not a technological determinist in that he does not absolutely prioritise the technical mode of communication over other systems.

<sup>17</sup> Stiegler is also heavily influenced by Gilles Simondon's philosophy. Interesting, Simondon explores the way in which human beings become a 'milieu' for technical networks (Viana, 2015), and thus he has similarities with Luhmann's systems theory.

communication and hence the focusing of attentiveness and memory. Taken in the context of Stiegler's broader work, this outsourcing of our mnemonic capacities to media technologies is an ancient and fundamental aspect of human existence. What is new is its form and effects.

But as much as this indicates the way in which communication systems have 'irritated' psychic systems, the irritation cuts both ways. The psychological need to make meaningful spheres and sustain a sense of situation awareness has also contributed to the differential emergence of filter bubbles in the digital world. Filter bubbles are, therefore, not some easily discarded communication fad. They are part of human socio-technical ontogenesis. Any critique of the way in which they immunise us from cosmopolitan intimacies must begin as an immanent critique: as a critique of the dominant forces that shape the particular functions of these algorithms, and as a theorisation of alternative filter bubbles. I argue that these dominant forces (perhaps Luhmann would say 'irritating systems') concern the political economic rational of social media platforms and the positioning of the subject in our complex global world.

## **The Politics of Platforms and Cosmopolitan Consciousness**

In the literature that explores filter bubbles there is a strong sense of who is to blame for their existence: the Web 2.0 monopoly of behemoth companies such as Google and Facebook and the neo-liberal states that enable them for economic and security reasons. Eli Pariser states the economic logic bluntly: 'As a business strategy, the Internet giants' formula is simple. The more personally relevant their information offerings are, the more ads they can sell, and the more likely you are to buy the products they're offering' (2011: 7). On the one hand, this entails market research. As Van Dijck (2013: 162) argues, 'locking in' users enables fine-grained forms of predictive and real time analytics. As much as it sorts information for the users, it also sorts users for marketers. On the other hand, the personalisation of information produces a stronger sense of desire for particular products that are often linked to online points of purchase (ibid: 157-8). Gillespie (2014) notes that platform designers draw on psychological research to anticipate what kinds of algorithms users will respond positively to, thus enabling the frictionless channelling of this desire.

Of course, advertisers are old hats at seducing consumption through both anticipating and constructing desire. The capacity for personalised surveillance and information curation intensifies this anticipatory logic. For example, the *Google Now* application studies user activity and then delivers locally relevant information the user may find useful. A favourite band may be playing nearby. Up comes a notification with the details and a link to a ticket vendor. As Andrejevic and Burdon (2014) argue, the capacity for this kind of prediction is contingent on the proliferation of logical and physical sensors throughout our environments, providing ceaseless surveillance of an ever expanding digital menagerie of objects and practices.

What is interesting about these logics is their commonality to both market-driven companies and security-driven nation states. Consider Edward Snowden's leaks of National Security Agency documents that suggest public-private surveillance partnerships between companies such as Facebook and intelligence organisations which exploit data 'back doors'. Consider the intimate relationship between the United States Government and Google, the latest in a long line of companies like Boeing and Raytheon to provide infrastructure for the military-industrial-surveillance complex. Responding to Snowden, David Lyon (2014) notes the way in which both companies and states exploit the move toward actuarial, predictive forms of surveillance aimed at entire populations. In Lyon's conversation with Zigmunt Bauman (2012), the thinkers explore the way in which 'liquid surveillance' flows easily through these contexts, yet through social sorting mechanisms it comes to have a concrete influence on mundane everyday realities. The production of filter bubbles is surely a prime example of this.

As intimidating as it sounds, if the possibility of cosmopolitan intimacy lies in the transformation of filter bubbles, then we must take aim at these structural forces, as they produce the rational that guides the design of curatorial algorithms. We must take aim at the rational that seeks to recursively strengthen intimate boundaries so as to more effectively valorise or securitise personal information. If this rational is removed, then the need to keep spheres parochially intimate is undermined.

But who 'takes aim'? Surely only human beings, not inhuman systems. Here is where I break from Luhmann's system theory and the way it decentres the subject. I argue that we must restore the subject (although not in his or her masterful, Cartesian form) because only human beings are concerned with the dialectical contradictions between inside and outside, between intimacy and cosmopolitanism. Only people, not systems, can move to overcome these contradictions. The immanent critique of filter bubbles must point towards both a new politics of platforms and a corollary form of cosmopolitan subjectivity, often explored in terms of a 'cosmopolitan consciousness'.

Robertson (1992) argues that globalisation has produced a planetary consciousness, a sense of the self within a world society. Although this seems to resonate with the Stoic figure of the world citizen, the degree to which this consciousness enables real cosmopolitan sociality and political problem solving is questionable. Ulrich Beck (2011) is particularly concerned with how this 'thin cosmopolitanism' can become a 'thick cosmopolitanism' in which diverse communities flourish. Drawing on Benedict Anderson's concept of 'imagined communities', Beck believes this requires a change in consciousness such that people feel a part of a global imaginary community. Yet, such a community can only be forged through a sense of shared fate and collective responsibility in the face of global ecological, economic and terror risks. Only global risk can produce a truly cosmopolitan world society. The global mass media are crucial in staging these global risks and hence constructing an imagined community. Yet Beck does not fully appreciate transformations in the nature of media, particularly the convergence of traditional media forms into social media platforms. Social media not only curate information about world events, they also curate social ties. Hence even if one feels affected by a global problem, one's social sphere remains immunised. This means that the cosmopolitan consciousness cannot just be a consciousness of risk, but of the politics of platforms which produce these forms of immunisation.

I am particularly drawn to Ulrich Beck and Elizabeth Beck-Gernsheim's (2013) discussions of cosmopolitanism because they also give detailed attention to intimacy, having meticulously examined multicultural love in the form of distant romantic and familial relationships, or what they call 'world families'. Yet interestingly, Beck's formulation of a cosmopolitan *consciousness* leaves little consideration for intimacy. His bleakly realist cosmopolitan imperative is 'cooperate or fail'. The extrinsic pressure to cooperate out of an 'egoistical interest in survival' produces a 'causal responsibility' toward others, rather than an intrinsic sense of empathy, care, love, reason, or cultural curiosity (ibid: 1355).<sup>18</sup> There is a scepticism toward the capacity for intimate spheres to open themselves to difference and replenishment based on the ecstatic nature of the social relation itself. Beck and Elizabeth Beck-Gernsheim's analysis of world families is again starkly realist. These families are by no means cosmopolitan in their attitudes, often breed hostility from their host countries, and also provoke hostility from familial traditionalists, including religious fundamentalists. Hence, even in their consideration of intimacy and cosmopolitanism, the Beck's do not want to embrace an intimate cosmopolitan consciousness. Yet here lies an aporia: if there is intimate cosmopolitanism, embodied in this case by world families, there must also be the potential for a related consciousness, unless these families are to be considered mindless zombies. This consciousness may not be global or universal, but this fact merely changes one's critical perspective from the diagnostic to the prescriptive. Moreover, this is a necessary prescription given the relationship between intimacy and

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<sup>18</sup> This argument is more palatable when considering the interests of nation states, but Beck clearly wants to apply his instrumental imperative to individuals as well.

cosmopolitanism discussed above. The question becomes, how can this form of consciousness be fostered to produce new forms of sociality?

## Imagining Alternative Spheres

How can we imagine and bring into being cosmopolitan intimacy? One method is through a form of experimentation, guided by the principles outlined above. Experimentation, that is, with a different form of sphere life, where the intimate is open to the cosmopolitan with neither negating or dominating the other. We are called to experiment with imagining and building porous spheres with different kinds of contact zones, surface tensions, and immune systems. That is, different forms of mediation. Spheres are morphologically dynamic, and for most of this essay I have discussed their algorithmic, curatorial form. I have argued that we cannot transcend the logic of curation that has structurally differentiated mediatic life. An imminent critique of curation should begin with imagining alternative curations in which difference is allowed to penetrate spheres as positive infections. This critique would be immanent to both online and offline life, recognising their hybrid interrelationship. We must imagine hybrid forms of curation in which *difference is made visible and sociable*. These would take aim at dominant political economic logics, yet would embrace a form of being together that is generative of a cosmopolitan consciousness.

Bozdag and van den Hoven (2015) explore a host of alternative designs to filter bubble algorithms, produced predominantly by HCI researchers. The authors argue that most designs reflect one of two normative conceptions of democracy. They either seek to offer users more control over their information choices, in the vein of liberalism, or they seek to curate a more diverse and less personalised information set, in the vein of deliberative democracy. They critique these designs for their narrowness, pointing to other conceptions of democracy, such as contested republicanism or agonism. There are manifold democracies, and hence there should be a wide range of experiments conducted. I completely agree, but would add that experiments should exceed conceptions of democracy and related concepts such as justice, equity, freedom and so forth. Following Derrida, I believe these experiments should also be driven by concepts such as friendship, family, love, hate, care, cruelty, affect, emotion. These are the other colourful fibres one might find in the arabesque of a cosmopolitan intimacy.<sup>19</sup>

However, it is not enough to merely focus on new algorithms or social media. Online life is hybridised with offline life. Consider way in which offline and online situations feedback on each other via mobile devices (de Souza e Silva, 2006). Consider the way in which digital infrastructure dominates the landscape, especially in cities. Many quotidian spaces literally cannot operate without computation and sensory feedback (Kitchin & Dodge, 2011). It has now become quite easy to grasp Kittler and Griffin's (1996) once abstruse comment that the city is a medium. Hence, imagining and experimenting with new spheres enrolls all the spatial disciplines, such as architecture and urban planning (and by virtue of this, urban policy). The question becomes: what kind of physical spaces can cooperate with new forms of algorithms and media to produce cosmopolitan intimacy? Intimacy has long been associated with the home. Indeed, Richard Sennett (1977) historically traces the burgeoning of contemporary home life as a retreat from the cosmopolitan and its associated forms of consciousness and social skillfulness. Cosmopolitan intimacy may be able to sleep in the home, but it is not born there. Nick Stevenson (2003) proposes educational spaces as fields in which cosmopolitan learning can take place. Yet his discussion is limited to schools, which are mostly not porous enough to

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<sup>19</sup> I must mention the feminist dictum 'the personal is the political' when thinking about the relationship between intimacy and so called democratic politics, and indeed there is a wealth of debate about whether the mediation of the personal through the political has been socially or culturally progressive (see Illouz; Berlant). These debates are surely relevant to the forms of experimentation I am proposing.

admit the cosmopolitan flows characteristic of our current moment. Something more *public* is required. Papastergiadis (2012) finds a promising solution in public art spaces. Such spaces have a triple benefit: first, they are public and hence open to diverse flows; second, through careful curation and communication, they can play a pedagogical role in cultivating a cosmopolitan consciousness; third, they are often not coopted by the economic and technocratic logics which often bureaucratise social interactions, and indeed govern the politics of platforms discussed above.

The 'aesthetic cosmopolitanism' that Papastergiadis argues is offered by art spaces also resonates with the logic of curation. Curatorial semantics has entered the mainstream of computer data science, with whole journals such as the *International Journal of Digital Curation* now dedicated to it. Of course, the term emerges out of the arts, and although there are important differences between art and data science, like algorithms, art curation is in part an endeavor to make meaning out of the complexity of the artistic environment. Indeed, media artists have been trend setters in actually using curatorial algorithms as a way of reflecting on changes in the nature of knowledge, representation and the archive (McQuire, 2016).

Here the trajectory of my argument begins to align with the intellectual environment and stated mission of the Culture, Media, Economy unit. That is, I turn to considering how media, intimacy and cosmopolitanism align with the unit's concern with spaces of cultural production and debates around 'cultural economies' and 'creative cities'. Yet, having identified art spaces as charged with experimental potential, what kinds of art spaces out of the many possible kinds are most apt? Recently, Scott McQuire (2016) has provided an extensive investigation of media art practices in public spaces, bringing debates around serendipity, civility, and creativity under the concept of 'participatory public space'. McQuire puts emphasis on the potential of media art for experimenting with new ways of mediated sociality, pointing to the way many everyday digital media were prototyped in the art world. Following Lefebvre, McQuire also critically interrogates the concept of participation, which seems to possess many of the qualities of cosmopolitanism, such as a consciousness expanding encounter with the stranger. Participation has for some time been a central motif in artistic practice, and one that artists have always critically reconfigured, continuously aiming at alternative social relations brought about by aesthetic, curatorial and spatial strategies. As case studies, McQuire considers the media art of Rafael Lorenzo-Hemmer, colossal media art events such as White Night, and the gamification of urban space by art collective Blast Theory. McQuire makes a strong argument for the way in which these events cultivate the kinds of cosmopolitan consciousness I have been discussing.

However, McQuire's analysis is confined within the logic of the event. It is difficult to tell whether the ephemeral civility produced by the art event will have long term effects. McQuire is self-conscious of this when he critically discusses the deep ambivalence in the concept of participation. My concern is that visiting the occasional art event produces a perfunctory encounter, and the 'ersatz community' that Dean MacCannell (1992) argues is a way of reconciling our curiosity toward strangers with our deeply seeded fear of them. In as much as cosmopolitanism involves an opening of a sphere, one could argue its mode of becoming is always that of an event.<sup>20</sup> But as I have argued throughout, for this event to have gravity, the opening must also be an enfolding and augmenting of the intimate sphere. We cannot ignore the logic of the intimate, which Sloterdijk discusses so poignantly as an enduring nourishment. I am interested in hospitality and nourishment, opening and closing, the breathing of a sphere. It is clear that this requires more than an ephemeral event, but rather repeated, enduring interactions, and hence an enduring art space.

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<sup>20</sup> This mode of the becoming event is 'virtual' in Bergson's (1998) sense, rather than potential in the Aristotelean sense. That is, it brings into the field of the intimate that which already exists in the actual. Put simple, other people actually exist, even if they are yet to exist for me or you.

There are numerous art precincts being produced that take cosmopolitan community outreach seriously, and enable this form of enduring, repeated interaction. Toronto's 'Culture Plan for the Creative City' marries creative city investment with multicultural policies that attempt to make arts accessible to low income and ethnic people. Victoria's *Creative State* strategy has as one key initiative the construction of a major arts precinct that explicitly seeks to bring together the highly stratified community of Collingwood. The Collingwood Arts Precinct, following similar initiatives such as the Bristol Watershed Media Studio, will experiment with various digital media infrastructures. The *Creative State* strategy makes a clear call for cosmopolitan cultural citizenship when it states: 'Regardless of cultural background, age, gender or ability, regardless of where they live or what they earn, all Victorians are entitled to see themselves reflected in our cultural life – on our screens and stages, in our music, literature and art'. While there are cogent critiques of the way in which creative city policies have neo-liberal consequences such as widening inequalities and producing forms of social fragmentation (Leslie & Catungal, 2011), there is also contrary evidence that certain kinds of art precincts can do just the opposite. Take, for instance, Stern and Seifert's (2013) work in Philadelphia, Grams' (2010) work in Chicago, and Grodach's (2010) work in Dallas.

Interestingly, there remains little work done in either academia or urban policy and planning which considers the interrelationship between social media and these spaces. This points to a broader schism between two major forms of urban policy: 'creative city' and digital or 'smart city' policy. The former deals with cultural economy while the latter deals with technology-related infrastructure, business innovation, knowledge and skill, education and investment, and leveraging social media for urban planning and governance (Kitchin, 2014). These policies are strikingly non-communicative, given their prominence in a global north where cities must increasingly marketise culture and technology in the wake of industrial manufacturing. There is certainly no link between these fields that ethically considers the problems associated with filter bubbles. Here lies a significant opportunity for future research and intervention. It is at this juncture, then, where I suggest the imagining and experimentation with alternative spheres can and should take place. The new research unit seems ideally positioned to intervene here, and to take first steps toward imagining what Derrida may call a cosmopolitan intimacy that has 'yet to come'.

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