Assembling blog affordances: theorising affordances and agency in new media

Julian Hopkins
School of Arts & Social Sciences, Monash University Malaysia, Jalan Lagoon Selatan, Bandar Sunway, 47500 Selangor, Malaysia.
Email: julian.hopkins@monash.edu

Abstract

The concept of affordances is increasingly used in literature on new media. However this is often done in loose manner that does not capitalise sufficiently upon the ability of this concept to theorise non-human agency.

This paper proposes that affordances can usefully be combined with the concept of assemblage, drawn from Deleuze & Guattari, and actor-network theory, in order to develop a conceptual 'diagram' that describes key affordances as constitutive nodes in a dynamic assemblage of material, technological, sociocultural, and interpersonal personal interactions.

The categories of *basic* and *emergent* affordances, developed through an ontological and inductive reasoning, are proposed as an improvement to the concept of affordances that aligns it more closely with the sociotechnical relational dynamics of blogs, materiality and sociocultural components. These categories also encompass non-human agency in that, following a logic of scaled assemblages, each material expression of a technology is seen as emerging from the affordances of the underlying level.

An application of this approach is presented through a discussion of two examples drawn from a long-term ethnographic research into the monetisation of personal blogging in Malaysia. These demonstrate the utility of basic and emergent affordances as heuristic tools that explain which particular affordances were the most important in enabling personal blogs to develop and attract an audience. Subsequently, other affordances were central in allowing them to be transformed into suitable vehicles for in the advertising market.

Keywords

actor-network theory, advertising, affordances, assemblage, blogs, commercialisation, ethnography, genre, social media

Introduction

Blogs have been studied with regards to political influence, journalism, gender, identity, business, and other areas, and are relevant to studies of social media (e.g. Kaplan & Haenlein 2010). As with other media, the question of potential sociocultural effects of blogs relate to the underlying entanglement of technology and society. This paper focuses mainly on the latter question, and through an elaboration of the concept of "affordances", offers a heuristic model for anchoring analyses of blogs and social media in general.

The concept of affordances is increasingly seen in studies of new media, and has been used by Wellman et al. (2003), Baym (2010), Jenkins and Carpentier (2013), as well as by blog analysts (e.g. Al-Ani et al. 2010; Graves 2007; Luehmann 2008), and more recently with regards to social media (e.g. Germann Molz & Paris 2013; Gibbs et al. 2013; Hsieh 2012; Treem & Leonardi 2012). However, it is often used imprecisely, and the frequent use of a prefixing qualifier also suggests there is ambiguity in how it is understood. Overall, there is a need for a more detailed theoretical consideration of the term.

This paper builds upon Hutchby's (2001, 2003) discussion of affordances, and proposes that affordances can be fruitfully combined with the concept of "assemblage," as proposed by Deleuze & Guattari (1987). Although they did not address social sciences directly (Brown 2009), their ideas have been fertile in social-scientific analyses (e.g. Collier & Ong 2005; Jensen & Rödje 2009; Poster & Savat 2009).

This paper combines affordances with assemblage, and proposes a typology of blog affordances that can provide a heuristic model for further analyses. These affordances are further divided into two categories of *basic affordances* and *emergent affordances*. The former are an ontological category, understood as being essential defining components of a blog; the latter are contingent affordances that emerge from that particular configuration of affordances, but are not necessary outcomes.

Using assemblage as an analytical tool also helps to model change, conceptualized here as *rhizomic*. This describes the movement of connections between components of assemblages – the rhizome has multiple nodes, each is capable of generating new rhizomes, with unpredictable direction and progression that depends on interactions with its environment. Importantly, 'any point can form a beginning or point of connection for any other' (Colebrook 2003: xxviii). In this respect, the basic affordances are considered as 'obligatory points of passage' (Callon 1986) – nodes in the rhizomic analogy – being defining and generative discrete components of heterogeneous networks. Thus, by understanding the movements between the nodes, we can shed light on the ways in which certain media promote or prohibit particular forms of social interaction.

This paper proposes that model that integrates an understanding of material (or coded) objective limitations on the uses of technology, with the understanding of technology as inherently social. By understanding the blog as an assemblage constituted by causal relations between human and non-human components, it is possible to focus on particular affordances that can help to answer the question of what is "new" in "new media." However, the example of the monetising of personal blogging through the introduction of advertising also demonstrates a reterritorialisation of new media, a reintegration into "old media" patterns – underlining the limitations of technological determinism.

Methodological note

This paper draws mostly upon data gathered during an ethnographic research project in Malaysia over three years (2007-2009) that included on- and offline participant observation, a survey, and interviews. The bloggers involved were primarily urban ethnic Chinese, who maintained English language blogs with daily readerships ranging from 500 to 10,000. Details of the particular interviewees and/or fieldnotes are given in footnotes where relevant.

The research was aimed at following developments in personal blogging following the introduction of advertising opportunities – eventually, a new genre of "lifestyle blogs" emerged. Fortuitously, a company called BlogAdNet[1] started around the same time as the research, and was successful in registering blogs and convincing advertising agencies and other clients to use them as part of their marketing campaigns. The fieldwork mostly involved attending blogger events, participating in contests and related activities, maintaining two blogs, and interacting online.

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1 All names are pseudonyms

Defining affordances

Hutchby defines affordances as 'functional and relational aspects which frame, while not determining, the possibilities for agentic action in relation to an object' (2001: 444). Gibson, who coined the term, explained that an 'affordance cuts across the dichotomy of subjective-objective and helps us to understand its inadequacy. It is equally a fact of the environment and a fact of behavior' (1986: 129). The argument that '[a]ffordances are properties taken with reference to the observer' (Gibson 1986: 143) suggest that affordances are relational. Although they remain properties of the object, they are only empirically relevant when actualized through interaction with other actors or actants.

With regard to technology, the advantage of using affordances is that it avoids positioning technology as determinative of particular sociocultural outcomes, or situating the use of technology as completely socially constructed. A point not usually noted in discussions of affordances is that this therefore suggests the possibility of the agency of the non-material components. To develop this point, we can refer to Deleuze & Guattari's concept of assemblage, as well as the related actor-network theory (ANT). These situate human and non-human components together in dynamic heterogeneous networks, shedding light on how people's choices and range of action are inherently connected to the other components, and also how non-human components draw upon and limit other components. Agency is distributed across the components, and not assumed to lie solely with humans. It seems therefore that affordances and these theoretical frameworks can fruitfully complement each other.

A review of relevant literature provides some examples of how affordances is used in relation to blogging. Graves lists some of 'blogging's journalistic affordances' as: 'many eyeballs'; 'fixity'; 'juxtaposition'; 'editorial freedom' (2007: 340–2). Al-Ani *et al.*'s descriptions of blog affordances are very general – 'forming communities, expressing identity, receiving support from others, and expressing views of the war' (2010). Others such as Luehmann (2008), and Herring et al. (2005) use the term but do not develop it in detail. Discussing the uses of blogs for teaching, Tan & Sale also do not engage with specifics of affordances as a concept, referring to Wellman *et al.* (2003) and arguing that the '[m]ost significant [affordance] is the capability for ongoing organized knowledge building, incorporating the integration of a range of hyperlinked multimedia' (2010: 2).

Qualifying affordances

Salient points to note from the above is that the meaning of the term "affordances" is often taken for granted – sometimes to the extent of not defining it nor referring to Gibson (1986) or other source in the literature (e.g. Norman 2013). In addition, as Hutchby's distinction between 'functional' and 'relational' aspects of affordances also implies, the frequent use of a prefixing qualifier for affordances suggests a need to refine the concept.

A notable example of this is "social affordances". This was used by Wellman et al. (2003) who define 'internet social affordances', somewhat loosely, as things that 'can influence everyday life' (2003), and do not refer to Gibson. Germann Molz & Paris (2013) and Hsieh (2012) have also recently argued for the use of "social affordances" as a means to understand how social media allow for the development of particular types of mediated social relations. Looking at how "flashpackers" – recreational travellers – use social media, Germann Molz & Paris argue that 'possibilities for togetherness are shaped, but not determined, by the technologies flashpackers use on the road' (2013: 18), and note that '*social* affordances […] afford certain forms of sociability' between flashpackers and relevant others (2013: 5; original emphasis). A similar approach is taken by Gibbs et al. who also use a qualifier, describing, '''strategic affordances'' […] that draw on organizational members' desires for strategic ambiguity' (Gibbs et al. 2013: 105).

These approaches thus explain "social" or "strategic" affordances as outcomes of the use of the technology. In the context of digital literacy and the digital divide, Hsieh (2012) notes that the 'social affordances of ICTs are technologically bounded and socially constructed,' and uses the concept to explain the limitations of social media, as well as how social advantages in terms of networking are

only afforded to those with particular digital literacy skills that arise from their social context. Referring to the 'technologically bounded' aspect is closer to what this paper wants to focus on, but again does not but does not engage with the inherent sociality of the technology.

A stronger argument is proposed by Sun (2004), who overviews the use of affordances in the field of human-computer interaction, and addresses this relational aspect by arguing for the inclusion of sociocultural contexts into the concept of affordances, pointing to Brerentsen & Trettvik for whom affordances emerge 'as activity-relationships between actors and objects' (quoted in Sun 2004: 56). Sun distinguishes between 'instrumental affordances' which emerge 'from use interactions in the material context,' and 'social affordances' which are 'the affordances on the activity level emerging from use interactions in the socio-cultural and historical context' (2004: 57). This recognition of the 'material context' is important, and is echoed in Treem & Leonardi's argument that "the affordances of one technology are often the same or similar across diverse organizational settings because the *material features* of the technology place limits on the kinds of interpretations people can form of it and the uses to which it can be put" (2012: 146; emphasis added). This is an important point, and one that underlies the argument in this paper that is emphasising the relevance of non-human components of technologies. However, the opacity of the term 'features' is a weakness here – on what basis are these 'material features' excluded from the category of 'affordances'? (See also e.g. Gibbs et al. 2013: 116.) Brerentsen & Trettvik note how objects have inherent features (such as edibility), which however '*only* become affordances when some organisms relate to them in their activity' (2002: 54; original emphasis). Thus, the implication seems to be that only those activities that are carried out by a human (or an 'organism') in interaction with a technological 'feature' can be classified as an "affordance". This is a reasonable interpretation of Gibson's original argument, as he was focused on animal-environment interactions, but it means that the significance of the non-human interactions are passed over.

The agency of affordances

The above review demonstrates a common recognition of different facets of affordances. However, most seem to be rooted in an engrained distinction between material and non-material that undermines the central advantage of affordances, its recognition of non-material agency. As Graves suggests, the 'real power of the concept of a technological "affordance" derives […] from the way it hints that potential exerts its own pull' (2007: 335). The verb 'to afford' means that it is not the outcome alone that we look at, but we start from the technology and see what it allows and/or suggests. To focus only on what people do with the technology seems to be forgetting the other half of the equation. For example, when Brerentsen & Trettvik point to the affordances of objects external to the environment, such as tools, which are 'designed for use in specific forms of societal praxis' (2002: 54, 57), we can imagine a Neolithic stone axe, formed by striking the flint with a hammerstone. That tool would not be possible without the capacity of the flint stone to be broken in such a manner that a sharp edge results – an affordance of the inherent chemistry and structure of the stone, itself a consequence of particular geological processes.

This latter point is important when we consider digital technologies such as social media platforms, which are explicitly designed with particular sociocultural relational outcomes in mind (e.g. Bucher 2013). Hence, "features" or "properties" of a software platform are in fact affordances that were enabled by an underlying level of the technology. However, as Hutchby implies, most people engage with technologies as "worldly artefact[s]" (2003: 586), using the "features" as given, and without seeking to change them. Thus, my critique of the above analyses is not meant to imply that their conclusions with regards to uses of technologies are invalid, but is aimed at pointing out a common inconsistency with the use of the term affordances. This paper proposes a way forward by distinguishing between *basic* and *emergent* affordances (explained further below) and integrating affordances with a wider theory that also integrates materiality, social interaction, and agency – the theory of assemblage.

Assembling affordances

Assemblages are multiplicities of heterogeneous components that resonate through their causal relations. An assemblage has no more properties than those which emerge from the causal relations of its parts, and those properties exist only as long as that particular force of territorialisation maintains a "plateau", 'a continuous self-vibrating region of intensities' (Deleuze & Guattari 1987: 24). Assemblages are thus relatively stabilized, emergent, consequences of causally interlinked components. Although dynamic, assemblages have a certain amount of iterative regularity, perhaps in the manner of a spiral, and may stabilize and reproduce themselves through "territorialising" movements. However, they also contain "deterritorialising" movements that lead to "lines of flight" that can result in new assemblages (DeLanda 2006; Deleuze & Guattari 1987).

The assemblage contains an axis of 'expressive' and 'machinic' poles that lie 'in reciprocal presupposition' (Bogard 2009: 16), consisting of incorporeal components and material bodies and/or actions, respectively. The relevance of affordances to assemblage can also be seen when David Savat notes how technologies may open or close off fields or forms of action and thought (2009: 3), and how DeLanda argues that it is possible to 'distinguish [...] the properties defining a given entity from its *capacities to interact* with other entities' (2006: 10; original emphasis). These capacities may or may not be exercised, and have unknown potential given that their future positioning with regards to other entities will actualize new capacities.

Within the context of the relatively stabilised assemblage the components react with each other, and the affordances will limit – though not determine – how these bodies interact in particular configurations, and produce particular contingent emergent properties. This is where the concept of affordances can be used to develop a closer understanding of these relations, and complement the concept of assemblage.

The rhizomatic perspective inherent in assemblage theory would suggest that any particular affordance is a contingent, potential, aspect of the technology, and may come to the fore at any time – sometimes entirely unexpectedly, but it can also be more predictable. Understanding how the affordances are actualized brings us to the contingent, sociocultural context, i.e. an assemblage, and Deleuze & Guattari's argument that 'tools exist only in relation to the interminglings they make possible or that make them possible' (1987: 99) resonates with this relational conceptualisation of affordances.

Discussing telephones, Hutchby argues that 'there may be specific forms of interaction' that have developed as a result of 'a complex interplay between the *normative structures* of conversational interaction and [telephones'] *communicative affordances*' (Hutchby 2001, cited in Hutchby 2003: 585; original emphasis). In a similar manner, discussing Facebook, Bucher uses assemblage and emphasises its dynamism, explaining it as 'as a formation and process of assembling rather than a static arrangement,' (2013: 481) and implies the relevance of affordances by noting how 'by organizing heterogeneous relations in a specific way, [Facebook] constitutes a productive force: it makes new relations possible' (2013: 481). These arguments parallel the way in which affordances and assemblage are conceptualized here, and also speak to how affordances in software can be explicitly constructed to produce certain use outcomes.

Translating affordances
This paper also draws upon ANT, with regard to three key concepts in particular.[2] The first, the "actant", is discussed further below. The second is the idea of the 'obligatory point of passage' (Callon 1986: 202), whereby a particular component of an assemblage[3] may be uniquely placed so as to provide a constitutive means of 'translation' – the process "during which the identity of actors,

2 Jensen & Rödje note that Latour is directly inspired by Deleuze & Guattari "to which ANT owes a great deal" (2009: 2). Unfortunately, there is not the space here to engage in depth with ANT.

3 ANT uses 'actor-networks' which are broadly similar to assemblage in concept.

the possibility of interaction, and the margins of manoeuvre are negotiated and delimited" (Callon 1986: 206). This may occur within, or between assemblages. The obligatory points of passage may be non-human artefacts – such as the blogging platform required to maintain a blog – or otherwise – such as an oath to the constitution for a new citizen. The third, related, idea is the "black-box" – depending on the level of analysis, one may focus on particular actor-networks/assemblage or "black-box" them – i.e. take their overall impact as given, and not look into the particular components. In this case, they may become the obligatory point of passage for another assemblage that is the focus of analysis. Similarly, DeLanda argues that there can be a 'series of differently scaled assemblages, some of which are component parts of others which, in turn, become parts of even larger ones' (2006: 18).

Thus, "assemblage" is useful because it not only allows that that both human and non-human components have agency, but it also emphasizes how the world is built of many clusters of interlocking mechanisms, components connected through causal relations that are not restricted by predetermined spheres such as "virtual" and "real" dimensions, or materiality and immateriality.

A blog is an assemblage of computer code, blogger, readers, a CPU, and other components. Analytically, one could look into how a blogging platform is made of computer codes that nest in microprocessors and communicate through cables, or, as is done in the research presented here, take the hardware mostly as given, and focus on the users and other actor-networks that connect to it, such as audiences and advertising companies. Each of these components can be understood on one level as independent actors, and on another as dynamically interconnected clusters of components. As discussed above, what is often referred to as 'features' of technologies media are better understood in this context, as affordances of the different levels of nested assemblages.

Hutchby's argument is that affordances allow a way to imagine the "the interface between human aims and the artefact's affordances" (Hutchby 2001: 453). It is proposed here that assemblage can be usefully seen as this "interface" that builds a dynamic model of materiality and human agency, and that, within the concept of assemblage, affordances also provide a "diagrammatic function", mapping the possibilities and limits to relations between non-necessarily related factors (Deleuze & Guattari 1987). Next, an application of this approach to blogs is outlined.

Blog affordances

A blog can be considered to be an actant – that is 'any thing that does modify a state of affairs by making a difference' (Latour 2005: 71). Although it is created by a human actor, a blog is reacting and changing all the time, independently of the blogger: accumulating traces of incoming traffic (displayed in the counter); fending off potential hacks and spam; allowing or disallowing comments; displaying advertisements; and updating its software. The most extreme example of this would be "splogs" that are automated and able to draw content from RSS feeds in order to appear to search engines as if they are regularly updated (Kolari et al. 2006). Similar to a molecule, or a crystal refracting light, a blog has 'non-human expressivity' (DeLanda 2006: 14) when its affordances allow it to perceive and react immediately to the stimuli provided by data flows.

Blog affordances are programmed, and the impact of user-friendly blogging software was important in the uptake of blogging (Halavais 2002). Although the ability to quickly develop and iterate changes means that blogging software can be flexible and open to innovation, from most users' perspectives, blogging templates are typically taken as given and manipulated only by a minority (Papacharissi 2007), with most changes being made to the sidebar (Scheidt & Wright 2004). Similarly, in language that coincides with the use of affordances, Schmidt states that '[s]oftware code is fundamental for blogging episodes because it enables or restricts certain actions [...] a blogger can modify and personalize the software to a certain degree, depending on individual skills' (2007). The rapid iteration of software versions, aimed at developing particular affordances, is an important aspect of blogging that underlines both the importance of affordances, and their relationship with the users and producers of the software.

To explore an example of this, we can refer to Efimova & De Moor's (2005) brief discussion of the "blogroll" (a list of links in the sidebar). Afforded by hyperlinks, initially these often served as a personal list of favourite sites for the blogger to access easily, and interested readers could explore them too. However, when RSS feeds were introduced, they became less useful for this function. Nonetheless, many bloggers continue to keep blogrolls, but they are mostly used as a means of displaying affiliations with other blogs or interests, as well as a way to encourage reciprocal links from other blogs. Thus, while still depending on the hyperlinking affordance, they also perform a symbolic and connective use that can be seen more as a "social affordance" in the manner Germann Molz & Paris outline above. Here there are two types of affordances – the hyperlink is fundamental to the blog (as well as the internet in general), but the other affordance – that allows bloggers to develop reciprocal relations and display social or cultural capital – emerges from, but is not determined by, that underlying affordance.

To address this difference, this paper proposes a distinction between *basic affordances* and *emergent affordances*. These terms are defined below, and a typology is presented in Table 1, which includes examples of practices related to personal blogging that emerge from these different affordances. These affordances are proposed as a means of anchoring analyses of blogs in particular affordances, enabling a focus on the particularities of blogs (as opposed to other media), and two examples drawn from fieldwork are then discussed in order to demonstrate the applicability and usefulness of this approach.

Basic affordances
Basic affordances are those that are intrinsic to the blog medium itself, and derive directly from particular programmed aspects. For example, the ability to hyperlink is based on a functioning semi-autonomous piece of code. This is not only a surface level element used to connect to other website, but also connects the webpages and blog database together internally. There is an arbitrariness to it, because of – as discussed above – the possibility of always receding to a previous level. However, the reasoning behind this category is ontological, in that to take away any of these affordances would mean that the blog would become a different medium.

Emergent affordances
Emergent affordances are enabled by the interaction of the components of the blog, but are not reducible to any particular programmable code. They emerge through interaction with other affordances and/or components of broader social assemblages. For example, the ability to interact anonymously with other bloggers and readers is not the result of any one piece of program code explicitly written to enable anonymous interaction, but is an unintended, emergent, objective consequence of a series of sociotechnical decisions relating to the lack of legal restrictions on online publishing, and the distributed architecture of the internet.

Table 1: Blog affordances

Blog affordances			
	Affordance	**Explanation**	**Related personal blogging practices**
Basic affordances	Storage	• Memory is automated and expanded. • Archives and search functions make retrieval easier.	• Bloggers often speak of using their blog as a way to store memories. • A new reader can go over old posts, and get an idea of the blogger over time. • Practically unlimited storage means almost unlimited opportunity for interested persons to have their own blog.
	Perfect reduplication	• Simultaneous copies of blog content are available to multiple readers	• This enables multiple readers to access the blog simultaneously, to see the same content, and to interact via the comments. • Original content is prized, and unattributed duplication is condemned. • Undisclosed post-facto changes of posted material are usually disapproved of.
	Multimedia	• A range of media modalities are available. At least one (typically written text) is necessarily used.	• The overall style and design (colours used, fonts, header, etc.) are important as expressions of taste and in indicating genre. • Photos and/or pictures are usually present.
	Modularity	• A blog is constructed through relatively autonomous blocks of code, each of which enables particular functions and mediatic displays. The most fundamental module is the blog post.	• It is easy to add and subtract components, for example: advertisements, hyperlinks, hits counter, music player, etc.
	Hyperlinking	• The blog requires hyperlinking internal to the website in order to maintain structural consistency. • It is possible to connect to other sites quickly and simultaneously, inserting a blog into a network of potential relations.	• Incoming links increase overall visibility of the blog due to search engine algorithms. • Reciprocal linking is an important social practice, and non-reciprocal linking an indication of relative status. • Linking is not as widespread as often assumed.
Emergent affordances	Anonymity	• Ostensible anonymity is easy to achieve. However, most internet users can be traced, given the appropriate resources (usually limited to specialized operators or government agencies).	• Most bloggers are identifiable through their own choice. • A stable pseudonym, at least, is required for sustainable social relations. • Anonymity is sometimes used strategically, for example in commenting on blog posts.
	Disembodiment	• Social interaction is possible without physical collocation.	• This enables functional anonymity. • The use of photos, profile descriptions, and consistent performance is important to stabilize relations.
	Accessibility	• For any computer literate person with access to the internet, the barriers to starting and maintaining a blog are minimal. • One person may communicate to millions of people for the same cost as communicating to one person.	• Maintaining a popular blog requires regular updates. Owning a computer will help substantially. • The practically unlimited opportunity for creating blogs fosters individualism and mitigates arguments based on the public good. • Free blogging platforms (e.g. BlogSpot, WordPress.com) are ultimately supported by advertising revenues, and the provision of other services.
	Personalisation	• A blog can be maintained by a single person, therefore eliminating any formal gate keeping process. • The ability to represent oneself through a blog in such a manner that people develop a holistic a sense of the blogger as a person.	• Group blogs are a small minority of blogs, and often associated with professional organisations

	Interactivity	• It is possible to have direct interpersonal interaction via a blog, in particular in the comments area. • Interaction also occurs passively, with readers leaving traces in server logs.	• A blog without enabled comments is rare, and comments are often answered. However, there are many ways of interacting with their readers: email, instant messaging, social network sites, telephone, etc.

The emergence of the personal blog

This section will look at personal blogs, and demonstrate how the "diagram" provided by the affordances listed above can help to explain what Lüders et al. call the 'emerging genre' of the 'online diary' (i.e. personal blog) (2010: 956). They argue that genres develop through shared conventions and expectations, and that 'the technical affordances of the internet imply that conventions and expectations have been fundamentally transformed' (2010: 956). As Graves argues, a genre can be understood as a "manifest set of communicative affordances" (2007: 343). Following the logic laid out above, a genre can therefor also be understood as an assemblage (e.g. Drott 2013), which draws upon the affordances of the medium, as well as the communicative practices that develop through convention.

Echoing Lüders et al., personal bloggers interviewed for this research often expressed motivations for blogging by referring to a love of writing and drawing a parallel with a personal diary. Chee Keong[4] mentioned his love of writing and photography, the narcissistic element and the attention he gets; however, he concluded by saying 'even if there's no one reading it, I'd still be doing it. [...] Because […] instead of […] writing down a diary, I just write on the net' (Chee Keong, 2008, personal communication). This apparent window into the personal bloggers' lives is what appeals to readers, who often relate to the experiences shared by the blogger and/or enjoy them vicariously. This expectation of authenticity is not unreasonable, given that the blog affordances allow bloggers to communicate directly with their audience, and also that personal bloggers use their blog to openly reflect upon themselves.

The multimedia basic affordance, combined with the accessibility emergent affordance, including the ease of posting via mobile or fixed devices, allows the personal blogger to use text, pictures, and videos to regularly share a variety of thoughts and experiences; and the interactivity emergent affordance offers opportunities for the blogger to share and interact with readers. As Reed (2005) points out, a blog may also be felt as an extension of the blogger's personal life, a means to maintain friendships, and for creative expression. The personalisation emergent affordance allows a blogger to control the content of the blog in such a manner that the blog becomes a relatively reliable self-representation. This may be reflexive, in that it is primarily directed back towards the blogger, directed at an audience, or both.

Popular personal bloggers are expected to communicate a variety of personal experiences, in visual and written forms, and to interact with readers via the comments, or other social media. Over time, the blog affordances enable an accumulation of minor, quotidian, details. When this is done in a consistent manner, the result is a believable and personable representation of the blogger from which the regular readers can gain a strong sense of the blogger as a person. This is quite special to the personal blog genre, and enables the readers to develop 'extended parasocial relations' (Hopkins 2014), or 'perceived interconnectedness' (Abidin 2013).

Thus, personal blogs allow richer interpersonal interactions than many other media. However, the multimedia affordance also has clear limitations as compared to interpersonal face-to-face interaction. All affordances have limitations, but it is interesting to note that the limitations of the emergent personalisation affordance are mostly self-imposed, in that, although the blogger can reveal as many details as they want, usually they carefully measure the relative advantages and

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4 Chee Keong. Male ethnic Chinese blogger. Blogging since c. 2002. Readership: 5-10,000 daily. Interviewed in July 2008.

disadvantages of an authentic, revelatory, performance. This is particularly relevant when an objective of the blog becomes garnering an income via advertising, as we shall see below.

There may also be externally imposed limitations, such as legal restrictions on political or sexual content, or the blog platform's terms of use. The likelihood of these external restrictions being imposed often depend on the visibility of the blog, highlighting the need to take into account the territorialising movements of wider or coinciding assemblages. For example, Chee Keong's blog was notable for its open sharing of his recreational drug use. He recounted how, when he first installed the Google AdSense advertising service in 2005, the 'Google guy [said…] "I know you have a drug blog, if anyone complains, we have to take it down"' (Chee Keong, 2008, personal communication). He was able to make money rapidly, and proved it by posting a picture of the cheque he received – a common practice amongst bloggers then. However, another noted Malaysian blogger who disapproved of his open drug use complained to Google, and encouraged others to do so, and Google cancelled the authorisation after three months. Eventually, Chee Keong came to the attention of the police through a newspaper exposé, was arrested, and required to remove many of the offending blog posts.

More common, however, were instances of self-censorship and filtering that increased as the blog readership grew. Thus, Nicky[5] explained how she had once blogged about her difficult relationship with her mother. However, her mother was a schoolteacher, and her pupils discussed the blog in her class, leading to Nicky adapting her practices, and she explained that she would not write about such sensitive matters any more, saying: 'now I do write about my family, I put pictures up, but it's all happy stuff anyway; like funny things they say, trips, dinners' (Nicky, 2009, personal communication).

Magdalene[6] also reflected on the tension between blogging about personal issues and having a large audience, one that came to include her colleagues and company's clients, saying:

> there's too many people reading my blog I don't know what to blog about anymore. Lately lah[7] especially […] most of my entries are – I don't know, just very very superficial […] sometimes I wonder if I should set up a private blog or something. But in a way, it's like, when you blog you automatically […] want people to read (Magdalene, 2009, personal communication).

Thus, personal bloggers typically have a close relationship with their blog, and see it as an extension of their self. This is similar to the paper diary but, as suggested by Lüders et al., the fact that the blog is online, and viewed by others, means that it emerges as more than a diary. However, in speaking only of "technical affordances" – which one can assume refers to coded and/or "material" elements of the blog – Lüders *et al.* (2010) do not capture the detail of the causal relations that constitute the "personal blog assemblage". As argued above, some of these affordances are intrinsic to a blog but some are not. The actualisation of the personalisation affordance depends on what types of information the blogger chooses to share, and its full exploitation may result in a personal blog – as opposed to other blog genres. However, a blog cannot exist without the multimedia affordance, although this can be exploited in various ways. The blog affordances both suggest and limit bloggers' self-expression through their blog, and allow other

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5 Nicky. Female ethnic Chinese blogger. Blogging since c. 2004. Readership: 1-5,000 daily. Interviewed in October 2009.

6 Magdalene. Female ethnic Chinese blogger. Blogging since c. 2004. Readership: 1-5,000 daily. Interviewed in October 2009.

7 'Lah' is a Malaysian expression, commonly used to punctuate or emphasise portions of a sentence.

actants to influence it too. Thus, when we analyse a popular personal blog, we need to understand it as more than the creation of a single person – it is shaped by three main actants, which can also be understood as nested or connected assemblages: the coded components, the blogger, and the audience.

Therefore, by understanding the affordances as including relations between the non-human components, as well as between the human and non-human components, we can visualise how the blog affordances act as points of intersection that modulate the development and maintenance of particular forms of interaction, as relations between blogs, bloggers, and readers extend rhizomatically both on and offline. This will be further developed in the next section, which presents an analysis of how the opportunity to make money from advertising on personal blogs was both dependent on the hyperlink and modularity basic affordances, and on leveraging the personalisation emergent affordance.

Monetising the personal blog

This section will discuss the emergence of the lifestyle blog genre that emerged as a response to advertiser interest in connecting with the audiences of the personal blogs. The modularity and hyperlinking basic affordances are focused on, and the argument will also draw upon Callon et al.'s (2002) 'economy of qualities', to discuss how the possibility of tracking the audience allows for the blog to become monetisable through advertising. Two advertising functions are discussed: the "advertorial" – a paid blog post presented in the manner of a typical personal blog post; and "banner advertisements" – clickable advertisements, whose display is usually remotely controlled by the advertiser or its agent.

The basic affordance of modularity derives from the logic of coding, where autonomous blocks of code perform logical functions and are nested within each other or strung together. Visually, this is most obvious through blog design components such as the sidebar, the header, "widgets" (e.g. a Twitter feed), or discrete images. When bloggers are provided with the appropriate code, inserted as a module into the blog, advertisers can control clickable advertisements remotely, and monitor all clicks on those advertisements. A common example of this is Google AdSense,[8] which allows advertisements to be placed within and around blog posts, with the content of the advertisement being decided by algorithms that respond to the blog content.

With hyperlinking, both advertorials and banner ads can contain hyperlinks to the advertiser website. Additionally, each blog post is usually an individual webpage with its own unique URL – an expression of the modularity affordance – and is therefore indexable via a search engine. To leverage this, advertisers supply paid bloggers with "briefs" that include product information, as well as hyperlinks and "brand phrases," to be included in the commissioned advertorial.[9] Thus the advertorial becomes a quasi-permanent advertisement, contained on a single web page designed for "search engine optimisation" (SEO), with traceable incoming links, visits, and other derivable metrics.

Callon *et al.* (2002) argue that the process of commodification, or attaching particular goods to a market, happens through a process of 'qualification,' whereby goods are given particular qualities that translate them into objects of value in the market context. When bloggers sign up with BlogAdNet, they are required to install a "web counter" that records individual views of the blog pages. This enables the close tracking of the audience of the advertorial, with a precision that is impossible in other media (e.g. Bermejo 2007: 14–18). The statistics generated form an essential part of the service that BlogAdNet provides to the clients who are interested in the quantity and location

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8 https://www.google.com.my/adsense

9 James. Male ethnic Chinese blogger and BlogAdNet co-founder. Blogging since c. 2006. Interviewed in February 2009.

of the readers. The latter is important because the clients want to connect with Malaysian consumers, and the personal blogger – whose life experiences are most attuned to the interests of local audiences – is also well placed to express the desired branding message to local consumers. We can say that s/he is able to affectively "translate" the commercial message, thus connecting the two assemblages – the blog assemblage and the market assemblage. While the blogger carries out affective labour, the statistics, afforded by the modularity and hyperlinking affordances, provide an essential metrological translation device between the blogging assemblage and the market assemblage.

Affording branding work

Proving a direct link between advertising and sales is notoriously difficult, and advertising usually focuses on building brands. As Foster argues, a primary concern of business strategists is to avoid the '"commoditization" of their products and services [which] results in consumers seeking the lowest price possible for products regarded as generic and interchangeable' (2007: 716). This primarily requires distinguishing (i.e. "qualifying") their products from others by branding exercises, which ideally would 'inspire loyalty beyond reason' as the CEO of Saatchi & Saatchi, a global advertising agency, has argued (Roberts, quoted in Foster 2005: 8).

The added commercial value of brands comes primarily from the relational work that consumers invest in the consumption and display of these goods (Foster 2007) – brands are situated as nodes in rhizomatic assemblages, and depend on flows of desire through causal relations. Lifestyle blogs are thus well situated to mesh with a corporate preference for lifestyle marketing and informational strategies that deploy databases to target and define and enable a ' flexible response to culturally differentiated, rather than massed, consumers [and] "niche marketing"' (Slater & Tonkiss 2001: 179).

At a launch of a new line of breath mints, observed during fieldwork, the Brand Manager explained to me that they wanted to use bloggers to counter their competition's online presence, and 'to have a presence in the online community' (2008, personal communication). As evidence of the success of their campaign, she noted that if you googled the brand name and the slogan of the campaign, there were many blogs appearing straight away in the results.[10] Thus visibility in Google – based on opaque algorithms – was an index of a presence within an "online community". In marketing and advertising discourse this online community is constructed as a desirable space of authentic expression, and one that needs to be accessed. One reason for this is that advertisers want to leverage the extended parasocial relationship between the blogger and her readers, who are believed to be more likely to listen to the blogger's recommendations.

Naturalising affordances

It is useful to recall that Gibson does not limit his discussion of affordances to the material environment, noting that the 'richest and most elaborate affordances of the environment are [for humans] provided by […] other people.' (Gibson 1986: 135). Thus, bloggers learn about different blogging affordances through observing other blogs, developing genres in the manner outlined by Lüders et al. (above). Graves's argument that "how people actually use the object will be one factor guiding the development of the core technology and thus shaping the affordances of future iterations of the object" (2007: 337), reminds us that a blog platform such as Blogger,[11] is designed, programmed and operated by a company that depends on selling advertising space for revenue.

10 Fieldnotes dated 14 August 2008. However, it may be that this apparent visibility is more of a self-fulfilling prophecy, in that the brand name is unique and the slogan is a specific phrase, thus ensuring its appearance when googled. This suggests that marketing should focus on getting brands associated with generic terms such as 'happiness', or indexical terms or phrases such as 'How to make my breath fresh.'

11 https://www.blogger.com/

Thus, a person creating a blog on Blogger, sees "Earnings" as an option presented alongside other functions such as "Posts" or "Comments". If the tab is clicked on, the user is invited to sign up with Google AdSense, and encouraged to participate through assurances of the ease of use, the usefulness of the ads for readers, and that they can be integrated aesthetically into the blog. It is presented as a naturalized option, but an historical perspective shows how this has changed over the years. In 2008, it was necessary to add the functions oneself, using code and pasting it into the relevant parts of the source code. This was not something most internet users could do. By April 2009, the options to include AdSense as well as an Amazon affiliate scheme were integrated into the interface. The Amazon affiliate option was naturalized through the two choices presented: to sign up, or to indicate that you already have done so. In 2011, this changed again and the Amazon affiliate option was removed (Curtin 2011).

Although software is very malleable compared to most other technologies, in practice a minority of users are capable of changing the code. It is common to open the blogging interface and find that a feature has been added, or taken away. This reflects an aspect of Web activity where, more so than in many other spheres of life, users have learned to expect change as a default, and also that they have less control over interfaces that are provided without charge. The new interface can 'domesticate' (Latour 2004: 38) the blogger to a certain degree, and we can see how the blog has shifting emergent affordances due to the territorialising of the market assemblage, which may result in further influences on the subsequent social interactions that are enabled by the blog.

Conclusions

As suggested above by Graves (2007) and Lüders et al. (2010), genres develop through the actualisation of affordances. A discussion of the personalisation emergent affordance explained how blogs differ from "old" media in their ability to nurture relatively stabilised audiences, based on an engaging personal representation of the blogger, a perception of authenticity and – helped by interactivity – extended parasocial relations with the readers. When this new medium attracted the interest of advertisers, the modularity and hyperlinking basic affordances allowed the translation of the audiences into quantifiable metrics, and a new genre – the lifestyle blog – emerged. The lifestyle blog retains the personal blog's focus on the quotidian experiences of the blogger, but reduces the more intimate emotional and personal accounts in favour of consumer-led topics and accounts of social events. The latter are usually directly or indirectly related to public relations, marketing and advertising campaigns, and the lifestyle blogger receives material incentives for a significant proportion of his or her blog posts. The paid component of lifestyle blogs undermined the perception of authenticity fundamental to personal blogs, but the successful shift from personal to lifestyle blogs demonstrates the contingent interactions of cultural and economic factors interact with technological components.

The above examples have demonstrated how, by identifying blog affordances and the causal relations they afford, we are able to focus on the points of connection within and between the assemblages, some of which may be "obligatory points of passage". By orienting the investigation around blog affordances, we can learn about the particular ways in which blogs are linked in causal relations to the other actors, and draw conclusions about dyadic interactions and emergent patterns that form with and through them. It is a complex picture that shifts through time, depending on contextual perspectives. Blog affordances both limit and expand different types of interaction, and articulate relative to each other: for example, disembodiment affords anonymity – this can enable greater honesty and emotional closeness, but it can also enable disruptive and aggressive behaviour.

The affordances devolve from semi-autonomous packages of computer code, and interact with emergent effects. These are however consequences of the assemblage, not causes – they are observed or deduced from the operation of the assemblage, but this does not mean they can be inferred as antecedent causes. The categories of basic and emergent affordances, developed through an ontological and inductive reasoning, improves the concept of affordances by aligning it more closely, through a development of assemblage, with the relational sociotechnical dynamics of

blogs, materiality and sociocultural components. This helps to pinpoint the key elements of difference between different media, and move forward theoretical analyses of new media. The diagrammatic approach, derived from Deleuze & Guattari, provides a consistent framework that enables conclusions to be drawn. However, it is important to note that this classification has an inevitable degree of arbitrariness to it, and, in the fluid context of the Internet, affordances can shift rapidly. They are presented here as a form of "virtual diagram", describing potential relations between non-necessarily related factors – they are not purporting to detail a fixed set of actual properties, but the virtual diagram represents potential nodes, opportunities for causal relations. The actual assemblage, the blogs, bloggers and associated collective practices, is what is in motion at any point in time, and the affordances – as actualized, used, and observed – can be used as explanatory vectors.

Acknowledgments

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