Polymedia: towards a new theory of digital media in interpersonal communication

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Abstract

This article develops a new theory of polymedia in order to understand the consequences of digital media in the context of interpersonal communication. Drawing on illustrative examples from a comparative ethnography of Filipino and Caribbean transnational families, the paper develops the contours of a theory of polymedia. We demonstrate how users avail of new media as a communicative environment of affordances rather than as a catalogue of ever proliferating, but discrete technologies. As a consequence, with polymedia the primary concern shifts from the constraints imposed by each individual medium to an emphasis upon the social, emotional and moral consequences of choosing between those different media. As the choice of medium acquires communicative intent, navigating the environment of polymedia becomes inextricably linked to the ways in which interpersonal relationships are experienced and managed. Polymedia is ultimately about a new relationship between the social and the technological, rather than merely a shift in the technology itself.

Introduction

Until not so long ago most people wishing to communicate at a distance had a limited choice of media at their disposal, mainly expensive international phone calls or letters. As a result, the choice of medium was largely the result of constraints of access and cost. The proliferation of new communication technologies and the increased convergence that we have witnessed in the last few years are radically transforming interpersonal communication at a distance. This coincides with an increased demand for mediated communication given the rise in global migration and flows of human capital. Given that migration often involves family separation at a primary level (Parreñas, 2005), the need for transnational communication between migrants and their left-behind families is particularly acute. As a result the consequences of the proliferation of communication possibilities are experienced globally including in what is often referred to as the global South which has also witnessed a boom in mobile communication (Castells *et al,* 2006; The Economist, 2009). Once users have obtained either a computer or a smartphone and once the

hardware and connection costs are met, then the cost of each individual act of communication itself becomes largely inconsequential. So today a typical urban young adult of a lower to middle class income in many parts of the world, can choose between calling though a landline, mobile phone, or Voice Over Internet Protocol (VOIP) through applications such as Skype, with or without webcam; alternatively she or he can send a text or an email, use Instant Messaging (IM) or a variety of social networking applications.

In this paper we argue that the profound transformation in the usage of increasingly converged communication technologies has implications for the ways interpersonal communication is enacted and experienced. Polymedia emerged precisely out of such a need to describe, but also to understand, the emerging environment of proliferating communication opportunities and its consequences for interpersonal communication. So apart from proposing a new term to describe the emerging environment of proliferating communication opportunities, we are also proposing a new theory of polymedia. The term derives from the Greek word *poly*, meaning many or several. Although the term has appeared very sporadically in the academic context (e.g. Alm and Ferrell Lowe, 2001), there is no systematic claim and its main use so far has been for marketing purposes.

The purpose of this article is to sketch the contours of the theory of polymedia. This will be grounded in a comparative empirical study. In this short paper the ethnography is subservient to illustrating our theory. More extensive details of our study -which was concerned with family communication in a migration context - as well as background to the two ethnographic contexts may be found in Madianou and Miller (2011 and 2012); Madianou (2012) for the Philippines; and Miller (1994, 2011) for Trinidad.

What we argue in this paper is that polymedia is an emerging environment of communicative opportunities that functions as an 'integrated structure' within which each individual medium is defined in relational terms in the context of all other media. In conditions of polymedia the emphasis shifts from a focus on the qualities

of each particular medium as a discrete technology, to an understanding of new media as an environment of affordances. As a consequence the primary concern shifts from an emphasis on the constraints imposed by each medium (often cost-related, but also shaped by specific qualities) to an emphasis upon the social and emotional consequences of choosing between those different media. We will argue that navigating the environment of polymedia becomes inextricably linked to the ways in which interpersonal relationships are enacted and experienced. As a consequence, polymedia in effect helps to re-socialise the technology, since the responsibility of choice shifts from technical and economic, to moral, social and emotional concerns. So the argument will be that polymedia is ultimately about a new set of social relations of technology, rather than merely a technological development of increased convergence.

In order for polymedia to emerge as an environment of communication opportunities three preconditions need to be met: access and availability, affordability, and media literacy. After considering these, we will in turn consider: the importance of remediation (Bolter and Grusin, 2000); the ways polymedia become part of relationship and emotional management; the implications of media choice for personal and moral responsibility; and finally, how the communicative environment of polymedia becomes implicated in wider social transformations. Our theory of polymedia owes much to existing theoretical and empirical advances by scholars working on media ecologies (Horst et al, 2010; Ito et al 2010; Slater and Tacchi, 2004), mediation (Couldry, 2008; Livingstone, 2009), mediatisation (Couldry, 2012; Hepp, 2009) and the field of personal connections and digital media (Baym 2010; Broadbent, 2011; Gershon 2010). These literatures will be reviewed in the following section after a brief description of the empirical studies and contexts that inform our theory.

We developed our theory of polymedia whilst working on a three-year (2007-2010) comparative ethnography which investigated the role of new communication technologies in the context of international migration and in particular the ability of Filipino and Caribbean transnational families to maintain primary, long-distance

relationships under conditions of extended separation. Fieldwork took place both in the UK (London and Cambridge) but also in the Philippines and in Trinidad where we interviewed the left-behind relatives of our key participants. The paper draws on illustrative examples from this comparative ethnography as well as interviews with 171 individuals (several of whom were interviewed more than once).

Although the detailed description of our ethnographic contexts are given elsewhere, a brief discussion of the two empirical contexts that have shaped our observations is essential. The two contexts we are comparing are significantly different. The Philippines has over 10% of its population living abroad (POEA, 2009). Most unusually in the Philippines sending migrants abroad is a systematic, state-sponsored policy underpinning the whole economy (Asis, 2008), the Philippines being one of the top three remittance-receiving countries in the world (Jha *et al*, 2009). Gross national income (GNI) per capita was $1,790 for 2009 (World Bank, 2011).[i] By contrast Trinidad is essentially an oil and gas economy which makes up 40% of its GDP and GNI per capita at $16,700 for 2009 (World Bank, 2011). An earlier study by Miller (1994) reported that most families were transnational at the nuclear level, in the sense of having either parents, children or siblings abroad, though this is often high skilled migration. Today much of Trinidad's migration relates to its historical connections to the UK and North America while in the Philippines it is often driven by a range of push and pull factors (among others see Parreñas, 2001). Comparing these two different economic, social, political and media empirical contexts allowed us to reach more confident conclusions about the prevalence – or not – of polymedia.

Polymedia: theoretical foundations and influences
Before turning to the evidence from our comparative research we acknowledge that, unsurprisingly, there are several parallel developments that also lead towards this focus upon polymedia as a change of considerable significance, though other researchers have not so far used this term in this manner.

The word polymedia is deemed more appropriate than alternative terms. Multimedia is now established as the term for media which combine different content forms, such as text with audio and video so it would be misleading to use this term to capture the essence of polymedia as a communicative environment. Terms such as multi-channel or multi-platform on the other hand are based on an idea of hierarchy within media, which assumes we can know what is properly a platform, a channel or an application. One of the effects of technological convergence (Jenkins, 2006) is that such hierarchies become less meaningful as different platforms and applications continuously intersect with other media constantly creating new hybrid technologies, so that Skype can be launched through a smartphone, or IM embedded within a social networking site such as Facebook. It is therefore not surprising that participants interviewed in our studies often preferred the term 'media' rather than make distinctions between application, platform or technology which they often found confusing. One term that does recognise the nature of converging technologies as one composite environment is the term 'media manifold' introduced by Couldry (2011: 220) to capture 'the complex web of delivery platforms' and this is a perspective we also share with polymedia.

The term that comes closer to polymedia as a communicative environment is 'media ecology' and it is worth teasing out the differences – and similarities – between the two terms. Although the early work on media ecology emphasised the idea that media and technological environments shape societies and human affairs (McLuhan, 1964; Postman, 1970), recent research (Ito *et al*, 2010; Slater and Tacchi, 2004) has moved away from such technological determinist positions to capture communication systems and their usage through a broad lens that also considers their connections to wider social systems such as transport, health and government (see Slater and Tacchi, 2004). More recently, Ito *et al* have used media ecology 'to emphasise the characteristics of an overall technical, social, cultural and place-based system in which components are not decomposable or separable (Ito et al 2010: 31). Within these media ecologies Ito *et al* identify 'genres of participation' which are treated as alternatives 'to existing taxonomies of media engagement that generally

are structured by type of platform, frequency of use, or structural categories such as gender, age or socieconomic status' (Ito et al 2010: 26). This move from a focus on media platforms to the crosscutting patterns of engagement also underpins the argument behind polymedia as an integrated environment.

However, these authors place more emphasis upon place as sites of media ecologies, which was not the case in our development of a theory of polymedia given the often deterritorialised dimension of communication. However, the major difference is that polymedia treats this environment of communication opportunities as an integrated structure of affordances (see Hutchby 2001). Polymedia is not simply the environment; it is how users exploit these affordances in order to manage their emotions and their relationships. In this paper we will argue that this negotiation often becomes the message itself. Crucially, we are concerned with the consequences – whether social, emotional or moral – of users' negotiation of polymedia and their implications for the wider understanding of technology and society. Thus although polymedia shares the same starting point as media ecologies and the 'media manifold' (Couldry, 2011) regarding the understanding of media technologies as an environment of practice, we argue that polymedia advances the debate on the social uses of communication technologies by considering additional layers of meaning, functions and consequences.

Baym's recent work (2010) provides a similar wide-angle lens to the understanding of personal connections through digital media. Rather than remaining wedded to the distinctions between the individual technologies, Baym (2010) cuts the cake according to what she regards as key parameters of difference, properties that may be shared or make for significant contrasts among these new media. Seven are highlighted: kinds of interactivity, temporal structure, social cues, storage, replicability, reach and mobility (Baym, 2010: 6-12). Baym employs these key concepts to consider a wide range of facets of human communication including the degree to which we see media as more or less authentic in comparison to face-to-face interaction, the sense of community, identity, gender, veracity and the self and

how such factors work in various forms of highly personal or impersonal contexts for communication and the creation and maintenance of relationships.

A parallel trajectory comes from studies of 'convergence' which were more focused upon new product design and the concerns of the communications industry. There was a recognition that media with quite different functionality were staring to overlap and share platforms. Of particular interest are studies of the impact upon families (Little, Sillence, Sellen and Taylor, 2009). For example Broadbent (Broadbent and Bauwens, 2008; Broadbent, 2011) and her colleagues conducted an intensive ethnographic study over media use in Swiss families over several years. She examined which media such as the landline operated in relation to household, and which media worked better for closer ties or weaker ties, for work or for leisure communication. As with Baym (2010), Broadbent identified various key elements behind the choice of particular media such as 'privacy, discretion, needing immediate feedback, availability of the communication partner, frequency of conversations, familiarity, or formality of the relationship, time available, quality of the exchange' (Broadbent, 2011, translation courtesy of author). Broadbent focuses upon which media are more or less demanding of attention from the new normativities that emerge around parameters such as gender and the misunderstandings these can lead to.

This issue of misunderstanding is also central to Gershon's study (2010). Her work is primarily based on the minutiae of one particular usage, that is which media people employ when breaking up a relationship. Her focus is on how individuals now have to take responsibility and are judged morally on the decision as to which media to use. Her informants can be outraged almost as much by someone dumping them through what they see as an inappropriate medium as the fact that they are being dumped. Gershon develops her own terminology around 'idioms of practice' based on 'media ideologies' (2010). The emphasis on the moral consequences of choice of medium (what Gershon [2010] terms 'switching') is one of the dimensions of polymedia that we will highlight in this paper.

More broadly the backdrop to our development of a theory of polymedia draws on the recent developments of a theory of mediation (Couldry 2008; Livingstone 2009; Madianou, 2005; Silverstone, 2005) and mediatisation (Couldry, 2012; Hepp 2009), two approaches that have recently largely converged (Couldry 2012: Chapter 6). Described by Silverstone as an essentially 'dialectical process' (2005) mediation tries to capture the ways in which communications media transform social processes whilst being socially shaped themselves. For example, Madianou has argued that mediation, because of the structural changes that it introduces in people's personal experiences with the media, has the potential to amplify negative emotions in situations of unwanted exposure or scandal (Madianou, 2012). Applied in the study of new communication technologies mediation or mediatisation also draws on approaches such as the social shaping of technology (MacKenzie and Wacjman, 1999; Wacjman, 2002) and domestication (Berker *et al*, 2006). Applied to interpersonal communication mediation provides a more dialectical sense of the tension between the technical and the affective. This is evident for instance, in choosing a certain medium to suit a relationship, whilst recognising at the same time that the relationship is always in part constituted by the medium through which it was expressed. This resonates with recent arguments about 'living in media' (Deuze *et al*, 2012) which has been developed to highlight the ways in which social life is lived in (rather than with) different forms of media practices and mediated interactions. We will return to mediation and mediatisation when considering the final dimension of polymedia, that is the way it becomes implicated in wider social transformations.

THE CONTOURS OF POLYMEDIA

The starting point: media as an integrated structure

One of the first observations to emerge from our data is the evidence that users conceive of each medium in relation to an integrated structure of different media. This becomes clearer if we compare the environment of polymedia to historical situations when users wishing to communicate at a distance only had access to one or two media, such as letters and voice-recorded audio-cassettes sent through the post (Madianou and Miller, 2011a). Although we recognise that even in those cases

we can find early evidence of users treating media as a structure of opportunities (for example when choosing to write a letter rather than record their voice on tape, [*ibid*]) it is clear that the limited choice of media had an impact on interpersonal communication. The time lag of letters and audio tapes (since these were also sent through the post) would often cause frustration. So even though letter-writing is fondly remembered by our participants both in the Philippines and Trinidad, there is evidence that it shaped the relationships that depended on it in particular ways. For instance, Filipino participants would acknowledge how letter writing would often conceal problems and suppress conflict often leading to situations of deception (Madianou and Miller 2012).

Even in the early days of internet-based communication which were dominated by email we find that communication was shaped by particular medium qualities: for example, email has low levels of social cues which can often lead to misunderstandings. What changes with polymedia is that email is used seamlessly with, or alternatively to other media such as IM, social networking sites, webcam and texting. Users switch between these to achieve their purposes: what cannot be achieved by email, can be accomplished by webcam, or instant messaging or a phone call. Email is not simply email; it is defined relationally as also not a letter, not a text message and not a conversation via webcam; which, in turn, is not a phone call. This is very different from perspectives on media technologies which focus on each individual medium and its affordances (Hutchby, 2001). Our approach owes more to structuralism as developed by Levi-Strauss (1963). His central point was that an entity was determined as much by their relationship to that which they are not as to that which they appear to be. So our first step towards polymedia is understanding media as defined by their relationship to each other rather than in themselves. We argue that this is a new phenomenon despite early historical iterations (Madianou and Miller 2012) as it is only through the recent proliferation of platforms that users can truly exploit a variety of opportunities for communication freed from the constraints of each medium's functionalities.

Preconditions: access, affordability, literacy

In this paper we fully recognise that polymedia remains an aspiration and not the current state for much of the world. Much of our fieldwork has been concerned with conditions of considerable poverty in the Philippines where one of the reasons texting is so prolific is simply that it remains relatively cheap.[ii] Our point is rather that polymedia is sufficiently common and the trajectory to its further spread is evidence that this is the right time to try and comprehend its future consequences. It is already clearly present amongst many of our UK participants, but also in Trinidad, especially amongst our younger and educated participants who had broadband connection at home and for whom a 'Blackberry' smartphone seemed an almost essential accessory. Even in the Philippines, polymedia is becoming a reality for an urban, young and middle class demographic.

The empirical environment that best equates with polymedia is that described by Gershon (2010). College students in the US pay for their computers as one-off purchases while the cost of connection is through post-paid plans. In their case, any single communication is almost entirely separated from the cost of that act. What emerged from our work in Trinidad (though much less so from the Philippines where pre-paid communication is prevalent even for mobile broadband subscriptions) was that the significant change represented by polymedia may be linked to the issue of overall cost of communication. Even when the price of a phone call declined people remained conscious of that price. But when middle class Trindidians take on monthly plans with unlimited broadband access either for a computer or a smartphone then the cost of each individual act of communication became less relevant (as it was subsumed in the overall cost of a monthly plan).

The rising popularity of smartphones also contributes to the emergence of polymedia. This was more prevalent in Trinidad where once computer-based media are to be found in people's pockets (see Miller 2011). For smartphone users the choice of medium is no longer determined by access, although as these technologies evolve users constantly have to update and improve both access and their media literacies (Livingstone, 2004). Apart from access and cost the other prerequisite for polymedia is media literacy (Livingstone, 2004). According to a skills-based approach

media literacy consists of four parallel processes: access, analysis, evaluation and content production (Livingstone, 2004). Users need to be able not only to analyse and evaluate media content, but also to produce their own. Discussions of the second-level digital divide (Hargittai, 2002; 2007) note that although access is a prerequisite it does not guarantee a particular user's media literacy. Further, inequalities can even be heightened in the new online environments (Hargittai, 2007). Our research confirms the continued asymmetrical distribution of communication technologies transnationally (first-level digital divide), but also those arguments relating to second-level digital divides (Hargittai, 2002). For example, in both the Philippines and Trinidad our older participants were less likely to produce their own content, for example, blogs, and relied more on familiar technologies such as voice calls.

In the Philippines first and second level digital divides were often present in the same transnational family. International calls are still prohibitively expensive in the Philippines, even with the use of pre-paid international cards (Madianou and Miller, 2011b). So for those left behind calling was not an option. On the other hand, migrant themselves often lacked the necessary digital media literacy to fully exploit internet-based platforms (second-level digital divide). Left-behind children who were more media literate faced parents who could more afford the costs of communication but who did not always have the media literacy to make use of the technologies' full potential. Many of our informants developed media literacy skills precisely in order to be able to communicate in conditions of separation, such as Filipina migrant mothers and grandmothers who first went online in order to see their children and grandchildren though webcam.

As we have noted polymedia is not merely the proliferation of new media and the choices this provides. It is only fully achieved when the decision between media that constitute parts of one environment can no longer be referred back to issues of either access, cost or media literacy by either of those involved in the act of communication. The following discussion of the dimensions of polymedia needs to be couched in this acknowledgement of the existing structural limitations. We are on

a trajectory towards polymedia and although we acknowledge the constraints, to given them too much weight would mean that we would ignore an opportunity to understand a fundamental transformation of mediated personal communication.

Dimensions of polymedia: remediation

Polymedia emerges gradually involving a period of remediation (Bolter and Grusin, 2000). Bolter and Grusin's theory seems to apply particularly during the initial development of a new medium. Remediation is important because the core technologies often evolve incrementally. If we take the example of voice communication in the life histories of Filipino transnational families we see the situation evolves from the phone in a village store, to the neighbour's phone then a landline in one's own house, then expensive mobile phones, then texting and now internet calls through VOIP and potentially smartphones. This is equally a movement from the phone as a very special instrument used for ceremonial gatherings of the family at Christmas, to a contemporary situation where a mother can 'chase' her teenage daughter via texting all night until she is found to have reached home safely.

Re-mediation is also a theory of relationality, but applied diachronically (vertically) through time rather than in the present (horizontally). Nisha was one of many Trinidadian respondents who noted that at first emails were simply regarded as computer-based letters and in effect the solution to the lack of interactivity consequential upon the excessive time lag in responses to letters. So initial emails between herself and her sister were often three or four pages long, inspired by their excitement in the potential for more immediate response. Only gradually did emails transform to becoming mainly very brief spontaneous messages that also lose much of the orthography and care that was associated with letters, such that emails today bear little relationship to their predecessor. Although the technology remains constant, the process of remediation controls the transformation in its usage as a communicative genre.

Nisha's relationship to the telephone is equally one of remediation. Rather than being more intimate, spontaneous and informal, at first Nisha sees quite the

opposite qualities in phone calls, partly because the phone first emerges as a very expensive medium. She recalls very stilted communal family calls mainly at Christmas and other festivals. The precursor for this kind of phone call was actually the traditional message sent out by those living abroad to their families through radio. As a result for a long time Nisha felt very awkward about the phone, which she could not regard as neither personal, nor authentic.

Because of this kind of time lag associated with re-mediation, people retain associations of technical limitations for particular media even when these are long gone. For Nisha using Facebook was at first was predicated on the huge popularity of ICQ for several years in Trinidad (Miller and Slater, 2000). With its facility for random contacts and instant messaging ICQ prepared people for the idea that communication could now be with pretty much anyone from anywhere. It therefore took her a while to appreciate that in many ways Facebook is quite the opposite of ICQ, since this openness in ICQ was associated with anonymity and people you didn't know and didn't expect to know. By contrast, Facebook was in many respects the elimination of anonymity and soon became a medium where you only accepted requests from people you thought you had known face-to-face at some point.

In most cases remediation falls away as an aspect of polymedia which then facilitates quite unprecedented possibilities of new media. Many of our UK-based Filipino participants are now grandparents as their children have grown up and have children of their own. The development of webcam is creating a whole new world of relationships between toddler age children and grandparents. While such young children do not readily comprehend a relationship only with a voice on a telephone, they can quickly become responsive to someone on a webcam. We found cases of grandparents able to effectively babysit for hours and play with huge mutual satisfaction from both ends of this relationship (Madianou and Miller, 2012).

Even for those without grandchildren, webcam was seen as a blessing for older people who were either technophobic, or who had never learnt to type. It could be set up for them with a minimum of technical mediation and become instrumental in

maintaining contact with their families. As a Trini reported 'Yes my mother uses Skype, my mother is wheelchair-bound and has been for quite a number of years and especially after my father died but even before my father died it was like this. My older brother who is very computer savvy decided that he would help my mother to stay in touch with all the family abroad in the easiest way right in the comfort of her home so he got her a computer, taught her how to use it, got her the webcam and the microphone and everything and she speaks to the family in Canada and so on, quite frequently'. To conclude, this third stage recognises that media come with histories that continue to impact upon their contemporary usage.

Dimensions of polymedia: affordances and emotional management

In this section we will observe how the vertical relations of remediation are increasingly replaced by the horizontal relationships among digital media. In *Migration and New Media* we provide many examples of the way different aspects of relationships exploit differences between the media (Madianou and Miller, 2012). Here for the sake of brevity we will include just one example of polymedia: the way they become part of the control and expression of emotions and in turn of personal relationships themselves.

The mere co-existence of media can be used for affective intent. Raj, a Trini, is in constant Skype contact with his partner back in Trinidad but still he sends her a text her first thing in the morning:

> 'hope you have a good day, be safe, make sure you take your break, eat properly, drink your water - because she doesn't like to drink water...just be on the look out. I miss you and I love you, hope everything is good, I think about you all the time'.

Similarly, a participant on Facebook who is starting to get into a quarrel may at that point shift from the more public side of Facebook to the use of its private messaging or IM like facility for chat. Sandra, a Filipina mother to two grown up children likes to Skype her children as she can see them and feel confident that they are well.

However, there are occasions when she would prefer not to use it, as when she is sad or upset and doesn't want her children to sense that she might be having problems. On those occasions she feels email gives her more security and control over these communications.

Polymedia is particularly important in Filipino mother child-relationships because the media is constitutive of the relationships itself. For some a key attraction of email was simply that it was not voice, and used at times when voice would have caused embarrassment. A child who is embarrassed to ask for money from their parent may resort to texting instead. Others avoid voice for any particularly bad news, or during a quarrel when a conversation might turn into an argument. Texting avoids having to hear a riposte that may be negative and stressful. Patricia, a 23-year old Trini notes:

> 'if there is a problem that you need to work through or if you are upset about something the phone is definitely better. I mean email is useless if you are emotional…. whereas a phone call you can just blab on, cry or whatever. Yeah well in my final year my boyfriend and I broke up. This was the guy I had been with the whole 3 years I was in England……and I would call my mother all the time and just cry with her on the phone'.

So long after the days of letters and cassettes the distinction between voice and text continues to be a major parameter of choice. For a Filipina parent listening to the voice of their child remains paramount, as a means of gauging their feelings. Yet when things are fraught the telephone, can be experienced as disturbance, surveillance and rupture, with a particular depth of feelings perhaps because the media create a focus on the acts of listening and speaking.

Polymedia may correspond to distinctions between media, but also distinctions within a media. For example social networking can be differentiated in various ways. A young Trinidadian living in the UK uses MySpace for her friends in general, but Facebook specifically for friends and relatives in Trinidad. Some of our gay male informants in the Philippines used a different social networking site, or a different

profile within the same site to keep relatives separated from their contacts with other gay friends.

As might be expected there could be different interpretations of the capacity of any given media for emotional revelation and emotional consequences. Most people felt webcam revealed more than phone. But Jason, a Trini, discussing his communication with his mother in Canada notes that with phone conversation

'we're that close strange enough, she could just, from tone of voice, she could know exactly what's wrong with me. If I am coming down with the flu, if I had a rough day, if somebody had a falling out, she could tell everything. And the same, if something is wrong with her, or if anything…..Its not that easy to do from a internet conversation and usually when you speak to somebody on Skype they would usually talk to you about a happier time. Like someone is down and depressed they wouldn't really show their face on Skype, so I think the phone conversation is the reality of it, its almost equivalent to face to face. You can't see the expression but you could feel it'.

Polymedia means not just that certain kinds of media become seen as more or less appropriate to certain kinds of relationship. Most relationships create a particular configuration of media that works best for their particular communicative needs. This becomes very clear with the Trinidadian couple Burton and Fay. At first Burton notes:

'We had a huge problem with emails, because she would probably write an email that was 1000 or 2000 words long and I would have trouble trying to finish it and do my work as well, like respond to everything she says, and not knowing what this means or what context its coming from, because like one email for one day will end up for the whole week with me trying to figure out what the person said.'

Behind this was the more basic discrepancy between Fay's preference for text and his for voice.

'It's her, it's in her DNA or blood to be more sensitized, or be more influenced... she prefers to read than ...prefer to read a book than see a movie, I would prefer to see the movie and read the book after. That's how it is, I don't know, a lot of people its probably the same thing, but she would always tell me that words would turn her on then, rather than...sight or whatever it is.'

By contrast Burton found voice to be natural and much easier to interpret while he would struggle to work out quite what he viewed as each of the 50 or 60 points made in an email actually meant. As a result this couple construct their own idiosyncratic primary media for transnational relationships which was to send each other daily little voice files between 2 and 7 minutes long, a sort of voice-based email. In a situation where Fay didn't like phone calls and Burton became confused by emails, this worked for them. Few individuals confine themselves to a single medium, most operate a repertoire of alternative media which may relate to different people, different kinds of messages but also these issues of emotional control and expression. For each individual, polymedia represents a kind of their personal repertoire of communication media and of emotional registers.

This helps clarify what we mean by a re-socialising of the media. First, issues of access, cost and literacy move from foreground to background. This development ties is with the rise and proliferation of new media allowing people to consider media as an integrated environment of affordances and propensities such as the issues of temporality or storage capacity discussed by Baym (2010) and Broadbent (2011). But in turn each of these correspond to aspects of social relationships so each affordance (Hutchby, 2001) is not an abstract attribute of media, but a quality likely to be exploited within an emergent social relationship. Our discussions in both fieldsites are replete with comments such as 'Maybe if you are sad the phone works best, it depends, if you are angry then the phone doesn't work that well.' Some of

children in the Philippines found it difficult to say 'I love you' to their mothers in actual co-presence, but could express this by phone or text, while others found that the ambiguous position of webcam between absence and presence allowed this to become their 'I love you' medium where all others failed.

People manage their social relationships through an increasing exploitation of differences within the composite structure of polymedia. While these may be legitimated as technological differences, in practice people may have quite idiosyncratic interpretations of those technological propensities. This point becomes still more important when we turn from this general socialisation of the media towards the more specific issue of moral responsibility.

Polymedia as increased moral responsibility

The idea that polymedia creates a new condition of moral responsibility is most clearly presented in Gershon's (2010) study of relationship break up amongst US college students. As her book makes clear an individual who ends a relationship may be judged as much for the medium they employ in that breakup as for the decision to break up. The clear implication is firstly that some media are considered morally more appropriate than others, and that once we reach polymedia an individual has no external excuse as to the choice that they made, so they are held personally responsible for that decision. But where our conclusions differ from Gershon's is that while she explains the misunderstandings that arise as a consequence of her participants' different 'media ideologies' and lack of standardisation of usage (2010) we have generally observed the development of considerable normativity regarding what is generally seen as acceptable mediated behaviour.

One likely explanation for our different conclusion may be cultural. There is quite likely a kind of cultural gradation that is brought out through our comparative studies. It would not be that surprising that, with its ideology of individualism, the US is the least normative, while Philippines most quickly re-establishes normative expectations and Trinidad lies somewhere in between. In our research we found, for example, that texting in the diaspora was very different from the genres that have

developed around texting within the Philippines (see Pertierra *et al,* 2002; Pertierra, 2010) but has already developed clear and recognisable norms. One is a pragmatic genre for giving sequential instructions such as the working of remittances or investments in a property, or how an older sibling should deal with younger siblings. They may be used as signals for other types of communication (to signal that a remittance has arrived for instance), and to organise communication as a whole. Two further genres include the circulation of religious homilies and the circulation of jokes. The establishment of these given genres shifts polymedia from an emphasis upon individual choice to one of the cultural construction of agreed norms of usage. But this can equally imply individual moral responsibility for appropriate usage.

The same applies to social networking. As McKay has recently noted from a study of Filipino use of Friendster and Facebook the basis of usage has little in common with arguments about networked individualism in Wellman (Boase and Wellman, 2006) which see networking as essentially linkages between individuals (McKay, 2010). A Filipino who uses Facebook does so not as an individual but as part of an extended family where they are responsible for representing a wider social community in the same way that Hjorth and others have shown that CyWorld in Korea reflects the Korean kinship system with strong normative constraints on how people should behave online which is very different from Western individualism (Hjorth, 2009). In practice usage quickly comes to embrace often quite conservative ideas of gender, class or other social categories. Filipinos could discourse at some length on the different ways in which males and females used texting. As one Filipina participant put it: 'A woman would be more likely to text with the shortcuts, and the smiley faces, what people tend to call "text-speak"….. Men would generally shortcut but type it out in the actual sentence. And women are more likely to use terms of affection when texting. Not so much the men'.

An important contribution of our comparative study is that while we could also examine the establishment of around the use of Facebook in Trinidad, these would appear to be entirely different from those found in the Philippines. In the Philippines the core issues are around the avoidance of public embarrassment and a dominant

circumspection. By contrast Miller (2011) has a chapter in his recent book devoted to the issue of what makes Facebook Trinidadian and this is dominated by the term 'bacchanal' which is perhaps the most common word used to describe Trinidadian culture. It highlights the constant potential for scandal and gossip. This has become so important to the use of Facebook that the local terms for Facebook that is *Fasbook* and *Macobook* are both terms that signify gossip and scandal derived from the implicit nosiness and voyeurism of Facebook. Trinidadians openly admit their love for scandal as a kind of revelation of underlying truth. So although both the Philippines and Trinidad seems to demonstrate a far more rapid turn to the normative than implied in Gershon's account (2010), the nature of this normativity is entirely different.

Juxtaposing the evidence from Trinidad with that of the Philippines and, in this case, comparing both to the Western context where there has been much more research on new media and interpersonal relationships (among others see, boyd, 2010; boyd and Ellison, 2008; Livingstone, 2008; Papacharissi, 2009), helps clarify those aspects of polymedia that do seem to lend themselves to wider generalisation and those that remain more parochial and specific. So while we concur with Gershon (2010) that polymedia sees a trend towards individuals being held as morally responsible for their choice of media, we find that this can be true just as much when there are clear normative cultural genres against which an individual's behaviour can be judged as against the situation where a stress on individualism leads to common misunderstandings between people as to what the implications of choosing a particular media might be.

Polymedia and mediation

As we explore each dimension of the theory and its inner workings we move towards a broader context within polymedia that includes marked social and moral consequences. In this final section we return to the notion of mediation or mediatisation discussed earlier in the article to consider the ways in which polymedia might be implicated in social transformations. This is especially evident in the work of Qiu (2009) on media use amongst what he terms the 'have-not' and

'have-less' in China. Long before such impoverished groups reach the condition of polymedia they see an impact of new media in their lives that amounts to more than the local 'media ecology'. Qiu argues that these changes have become instrumental to the formation of a new working-class in China today. That, for example, there will be new spaces such as urban villages where the location of new media outlets such as internet cafés and sites for long distance phone calls, become the setting for this new class formation.

The best example of this wider historical conjuncture emergent from our own work is the way we first came to an understanding of polymedia, not in the abstract, but as part of our study of the long distance relationships among members of transnational families in the Philippines and Trinidad. The point being that we are not just interested in the impact of one specific medium, our task was to understand the overall consequences of polymedia as an integrated structure upon the relationship between Filipino parents and their children. This is the reason we worked with both the mothers in the UK and then travelled to visit their children in the Philippines (Madianou and Miller, 2012). In our book we show how expectations that the advent of cheap and varied media would resolve the negative issues of separation were far too simplistic. About half of the children we worked with reported that new media had made their relationship with their absent parents worse rather than better. As a result we began to appreciate that much of what was taking place included struggles over power and attempts to use this media to transform and control the way the person at one end of this communication appeared to the other. So to observe that digitally mediated communication is not always improving the problems of separation within families is not to argue that digital media have no consequences. As we have shown the new media are now integral to the enactment and experience of these relationships. Children may counter the fact that their parents have greater financial resources to command media with the fact they have greater technical skills especially with computer-based communications. A young adult Filipino man in Manila notes in relation to his communication with his migrant parents:

'They never really found a way to get close to me because I always found a way to shield myself from them. Like with emails, what I do is I take a long time to reply. Like, I've read the email today but I'll reply next week. Usually, my dad would pester me like, "you're not updating. Are we still your parents?"

Another son for similar reasons insisted that communication centred upon email alone, and then took weeks before replying, a delay whose significance was certainly not lost on his father. In reverse, a mother in London uses email to stop herself getting angry with her son who tends to get drunk and make incessant claims for money. More generally the children tried to use polymedia to push their parents in the direction of a greater recognition of their maturity. In this one of the main instruments had become their choice of which particular media to use. It was these observations that made polymedia itself clear to us for the first time. So for social scientists polymedia will always be part of a much larger picture of historical conjuncture in this case the rise of transnational migration and its consequences.

Conclusion

This last point which brought polymedia back to its widest context is also central to our conclusions with regard to its importance. What we have suggested is that polymedia looks at first deceptively to be essentially a transformation in technology. That people who were limited to one or two forms of media for their communication now have access to a dozen different media. As such we would expect to concentrate on the new affordances these create and the ways these are employed. Much of the literature on new communication technologies has emphasised the dimensions of technical difference such as temporality, storage capacity, reproducibility, materiality, mobility, reach and so forth.

Such concepts are undoubtedly valuable and the first thing we need to understand about polymedia is how the media's functional propensities underpin their relational definitions and our understanding of them as an integrated structure. But we have used this paper to argue for a definition of polymedia that is rather more ambitious. We have suggested that what we encounter is not just a new horizontal distribution

of media whereby each particular media shifts in its meaning and implication relative to the other media. We have suggested that this extension in the internal relationship between media constitutes also a shift in the relationship between communicative media and society. In effect, it amounts to a re-socialisation of communicative media. As cost and access become less important and as media literacies develop, then people start to see the reasons why any particular person has chosen any particular media as a social act something that in our studies is found to be fundamental in actually constituting that social relationship. Such an understanding of polymedia as representing a shift towards a more socialised conception of media by the people we work with is in line with the more holistic approaches such as mediation (Couldry, 2008; Livingstone, 2009; Miller, forthcoming) or mediatisation (Couldry, 2012; Hepp, 2009) which try to understand the mutual shaping of social processes and the media.

Finally, we would argue that this case is best made, as here, though comparative ethnography. There are two reasons for this. One is that polymedia is something that is emerging at different rates and in different ways and with different constraints. It could be said to exist at present for only a rather small proportion of the population of the Philippines (urban, young and middle class), for perhaps the majority of the population of Trinidad but to have become almost ubiquitous amongst at least the younger population of the US and Northern Europe. Using material from all three contexts within this paper acts as a caveat to any claims to the consequences of polymedia that might appear as universal or ignorant of the continued constraints of digital divides.

The second point is that the implications of polymedia include some general trends such as the greater concern with moral responsibility, the wider re-socialisation of media and a greater degree of media diversity that may bear on wider issues of media ecology or the formation of new social groups. On the other hand the impact of polymedia will also have many local and specific implications that echo the retained cultural diversity of the contemporary world. As this paper has demonstrated the normativity of usage that emerges in Trinidad could hardly be

more different from that of the Philippines. This paper recognises that polymedia is gradually (however asymmetrically) emerging as a global phenomenon. Yet, there is no reason to think that it will lead to global homogenisation any more than increased heterogeneity. So a comparative approach retains our sensitivity to context and cultural difference.

What we hope is already clear, however, is that polymedia is developing throughout the world, even if at different rates. Our comparative work makes us confident in predicting that it is going to become relevant for media research in the future, since no media exist in isolation. There will, of course be many different interpretations of it as a phenomenon and arguments over its consequences and significance, which may well come to contradict each and every proposition that we have put forward in this paper. But to even begin such a discussion we first need a name for this new situation, and for that purpose we propose the term polymedia.

Notes

i GNI per capita is the dollar value of a country's annual income (Gross National Income) divided by its population. Source: http://data.worldbank.org/country/philippines
ii Texting when first introduced was free, although today it costs at least 1 Philippine Peso (£ .08) or less. Payment is generally pre-paid through small denomination transactions (Madianou and Miller 2011). Spending is encouraged as 'load' (pre-paid minutes) expires quickly after it is purchased.

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