Mitigating risk and facilitating access to capabilities: The role of affect in the design of an ICT-tool for queer youth in Asia

Benjamin Hanckel [a, b, *]

[a] Faculty of Arts and Social Sciences, University of Technology, Sydney, Australia
[b] Institute for Public Policy and Governance, Sydney, Australia

A B S T R A C T

Queer youth face discourses that position their experiences as 'wrong' or 'negative,' which creates barriers to information and support. Whilst new information and communication technologies (ICTs) present opportunities to circumvent and challenge these barriers (Hillier et al 2010; Hanckel and Morris, 2014) less is known about how risk is conceptualised and mitigated within the design of ICTs. This paper analyses one ICT-tool targeting queer youth across 10 cities in Asia. The study draws on ethnographic field notes, program documentation, and interviews with developers to explore the construction of this ICT-tool. Using Sen's (1999) Capability Approach and Ash's (2014) object centred account of affect, I examine how the technological artefact is engineered to produce an affective experience of safety that responds to structural inequalities. The findings indicate that designing a space of 'trust' permeates the narratives of the development of the artefact and impacts on the coding and infrastructure, as well as the development of content and policies supporting its implementation. Using affective markers the artefact aims to circumvent the geographically defined risks associated with collecting Internet data, whilst also enhancing the capabilities of marginalized youth. These findings have implications for how we conceptualise the role of affect in ICT-based programs.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

Throughout East and South East Asia many queer/LGBT[1] young people endure discourses and narratives that position their non-heterosexual identities, desires and behaviours as negative. In some countries this discrimination is embedded in legislation (Itaborahy and Zhu, 2014). For instance, within the last two years both the Singaporean and Malaysian courts have upheld legislation that criminalizes same-sex behaviour. Elsewhere in the region, such as in Brunei and Aceh in Indonesia, legislation has recently been introduced that strengthens the penalties for engaging in same sex activities. Thus it is within these contexts where the

"everydayness of compulsory heterosexuality …" (Ahmed, 2004, 147) persists, and where discrimination and stigma have implications for young peoples' wellbeing and their livelihoods. Such discrimination has been shown to create a climate that encourages verbal and physical violence (Thoreson, 2011; Pratt and Buzwell, 2006) and has negative impacts on mental health and wellbeing (Robinson et al., 2014; Dyson et al., 2003; Manalastas, 2013). Such contexts also hinder access to the limited support services available and limits opportunities to connect with similar others (United Nations Development Program, 2014a; 2014b, 2014c; 2014d). Furthermore, as Thoreson (2011) argues, feelings of insecurity in contexts that marginalise can limit mobility and agency, and in doing so narrow the economic participation of LGBT people.

Although these contexts are laden with risk, this does not preclude the possibilities for LGBT youth to engage in queer world-making (Taylor and Dwyer, 2014). Recent work (Hanckel and Morris, 2014; Robinson et al., 2014; Hillier et al., 2001; Paradis Forthcoming) has shown for those LGBT young people with access to new information and communication technologies (ICTs), these spaces afford them the capacity to access important (sub) cultural knowledge, social capital and support that assists them in

---

* Faculty of ArtsF and Social Sciences, University of Technology, Sydney, Australia.
E-mail address: Benjamin.Hanckel@uts.edu.au.
[1] The use of the terms queer and LGBT are used interchangeably in this paper. They are used as inclusive terms to include individuals who identify with a same-sex identity and/or desire and also includes those who identify with or may be questioning a gender identity other than their assigned sex and/or assigned gender. These terms also include those who may have same-sex attractions and/or be gender-questioning but do not identify with a specific same-sex identity and/or gender identity.

negotiating the complex terrain of self-making across both online and offline spaces. However less is understood about how these online spaces are constructed, and how risk and human wellbeing is taken into consideration in the making of such resources. It is within this context that this paper examines the design and construction of one transnational online space for LGBT young people in East and South East Asia. Drawing on ethnographic field notes, program documentation, and interviews with developers, I examine how this technological artefact is developed to respond to the risk that is prevalent in LGBT young people's lives, as well as how it aims to enhance their wellbeing and agency.

In discussing human wellbeing in this paper I draw on the Capability Approach (CA), developed by Amartya Sen (1999). The CA is used as a framework in this study to conceptualise development and was used by the practitioners in developing the technological intervention. The CA is focused on enhancing individual's capabilities so that they can live lives they have reason to value (Sen, 1999). In this paper I am interested specifically in the *making* of the technological intervention and its focus on wellbeing and enhancing human capabilities. Thus this paper examines the design and construction of the artefact and considers, as Oosterlaken (2011, 431) has argued from a CA perspective, how the technological artefact is constructed in its "… networks of interdependencies with people, other artefacts and social structures." Using an object-centred account of affect (Ash, 2014) I consider how affect is expected to be generated between technology and bodies, and how this is incorporated into design contexts, as well as its potential for addressing, or being used as a response to risk that persists in the lives of LGBT youth in East and South East Asia.

2. The capability approach: an overview

The CA aims to evaluate and assess individual wellbeing and social arrangements. It emphasises human capabilities, rather than focussing only on economic resources. It highlights the importance of expanding individuals' substantive freedoms and removing the "… various types of unfreedoms that leave people with little choice and little opportunity of exercising their reasoned agency" (Sen, 1999; xii). Sen refers to these substantive freedoms as '*capabilities,*' which can include access to quality health resources, sexual health information or opportunities for real political participation. The goal of enhancing capabilities is so that individuals can engage in "… states of affairs that they value and have reason to value" (Alkire, 2010, 193). It is these states of affairs that Sen (1999, 2009) refers to as '*functionings*' which are the 'beings' and 'doings' that a person does, and values doing in their everyday lives. Examples of functionings are diverse and can include: being healthy, being able to work, feeling connected to a community and/or feeling confident.

Importantly, the distinction between functionings and capabilities is, as Robeyns (2005, 95) points out:

> … *between the realized and the effectively possible; in other words, between achievements on the one hand, and freedoms or valuable options from which one can choose on the other. What is ultimately important is that people have the freedoms or valuable opportunities (capabilities) to lead the kind of lives they want to lead, to do what they want to do and be the person they want to be. Once they effectively have these substantive opportunities, they can choose those options that they value most.*

In this way the focus of the CA is on individuals having 'freedoms' to pursue ends that lead to lives they value. These 'ends' can include realising functionings that enhance individual wellbeing, as well as other goals, such as enhancing the wellbeing of others. A CA

approach then is concerned with the individuals "… ability to achieve *combinations* of valued functionings" (Sen, 2009, 233).

The CA, as Robeyns (2005) points out, is a framework that draws attention to certain types of conversions. That is, capability inputs (resources) must be converted into capabilities, which individuals can convert into functionings ('doings' and 'beings' that are constitutive of their lives). The conversion of these factors into capability sets are important, however their realisation is impeded by the contexts in which individuals are situated (Robeyns, 2005; Hart, 2012). For LGBT young people heteronormative contexts of risk that position their attraction, desire and/or identity as problematic and in some circumstances as criminal, are barriers that impede access to support services, peers and knowledge, as discussed earlier.

A particular benefit of adopting a CA is that it is able to bring to the surface the multidimensional and interrelated barriers that prevent capabilities from being realised. Recent studies (Hatakka, 2013; Bass et al., 2013) have shown this to be the case in their examination of ICTs in development settings. However, there remains a dearth of writing that explores the use of the CA at the intersection of development and the study of sexuality/gender identity, both as a conceptual tool to examine development settings (Thoreson, 2011), and to consider how it might be used in the design of technological artefacts (Hanckel et al., 2014). My focus here is to expand this work, and examine how human wellbeing gets privileged and incorporated into the design and development of technological artefacts for young people in development settings with diverse gender/sexuality.

2.1. The capability approach and technology: designing technological artefacts

For those working in technology and development studies there is much interest in how ICTs impact on human wellbeing (Oosterlaken, 2014). Zheng (2009, 77) has argued for adopting the CA to examine the "… life opportunities and the range of options for people to access and use ICTs to both improve the quality of life and to accomplish their goals". Whilst much of this work has focused on the wellbeing outcomes of completed technological artefacts, less work has been undertaken on design, and as Oosterlaken (2014, 20) highlights, "… theorising on the capability approach and design has only just begun."

Design here is used broadly. I use it in a similar way to Nichols and Dong (2012), who use "… the word design in the sense of a projection of possibilities, of the creation of a world that does not yet exist, rather than the popular definition of design as about giving form and style" (191). Whilst form and style are interwoven within the discussions of the development of the artefact, the focus here is on the 'possibilities' for LGBT youth that come from making and constructing one technological intervention.

A focus on design is important, as van den Hoven (2012, 31), argues, because

> … *design products empower us and constrain us, they enable us to do certain things and prevent us from doing other things; moreover they are ubiquitous and in part constitutive of our human environments. As such design products have an important normative dimension.*

This *normative dimension* is particularly important as design requires tradeoffs and choices about what gets incorporated into the design of artefacts. The CA can go some way to understanding these decisions, as Oosterlaken (2009, 98) argues: "… the concept of human capabilities offers a richer understanding of well-being" and in taking this approach can "… include moral considerations

concerning autonomy, privacy, sustainability, accountability, responsibility …" into the design of artefacts. To this end we can consider what capabilities might be enabled (or disabled) by the normative values that get incorporated into design. Oosterlaken (2009) in her paper draws on one example of *privacy,* albeit briefly, to illustrate this point. In her example she suggests that the CA might be used in debates about ICTs and privacy, which might allow us to reconsider how ICTs effect an individuals capabilities to control personal information flows. To extend this point, we might also consider how enhancing this capability through considerations about privacy in design might enable other capabilities. For instance Hillier et al. (2012) found LGBT youth valued spaces where they could be anonymous when exploring their identities online, due to the potential risks involved in disclosure. In this sense the capability to be in control of personal information has the potential to impact on whether other capabilities are realised. Thus how 'moral considerations' get incorporated into design is important for understanding what normative values get privileged over others and what effect/s this might have on an individuals overall capability set.

In this article I examine some of these moral, normative considerations in the design of the technological intervention, and, more specifically, the assumptions, expectations and risk mitigation that takes place within its development. Recent work has discussed risk and the CA in design as mitigating against (un) intended consequences of the built or developed artefact (Murphy and Gardoni, 2012). Here I want to concentrate on the risks that the artefact responds to – that is the barriers that prevent capabilities from being realised. However, as will be evident, the technological artefact also must respond to new risks that are created in its design for the (potential) users of the service.

3. Affect, design and technological artefacts

The CA is useful for conceptualising and evaluating well-being (Robeyns, 2005), however it remains limited in its ability to explain the complexity of technology in social processes (Zheng, 2007). To this end further theoretical approaches can enhance the CA, and help us examine "… how technology and human capabilities are related" (Oosterlaken 2012, 16) and why design features matter. In this paper I draw on affect-based approaches to design to further understand how technology is used to connect LGBT youth to capabilities.

Affect here is defined as the outcome of the encounter between entities (human and non-human) and how these entities become affected by these encounters (Deleuze, 1988; Thrift, 2004). Discussions of affect, as Paasonen et al. (2015, 19) point out, are centred around "… how bodies or objects may produce or experience intensity as they pass from one state to another." Affect is important here to the extent that it is engineered into the design of technological artefacts, and the potential role it is perceived to play in the process of enhancing capabilities.

In this sense, it may be best to think of *affective design* as a starting point, which Ash (2012, 3–4) defines as "the process of attempting to indirectly generate particular kinds of affects or responses through the material and aesthetic design of products in order to capture and hold users' attention." To this end we can consider how design incorporates certain elements into 'products' or artefacts, with the intention of generating particular affects from the encounter between the human and technological entity. This is evident in a variety of examples, for instance Thrift (2004, 73-74) discusses the affective design of video art and how it incorporates 'carefully staged and scripted' moments with the intent to generate particular affects. For Ash (2012), his work examines video game design, and how 'processes of programming and code' incorporate

signifiers into gaming narratives to (attempt to) control and manage the affective experiences of users. In this sense the technological can be "… understood as not merely instrumental but as generative of sensation and potentiality …" (Paasonen et al., 2015, 39) with the intent to result in particular outcomes.

Thus my interest here is on the design of encounters that can take place between the technological artefact (the intervention) and the (potential) user of the service: the LGBT/Queer subject. As Ash (2014) argues, "… objects generate and transmit affects themselves" (2), and in so doing produce what he terms an *inorganically organised affect,* which is "… an affect that has been brought into being, shaped or transmitted by an object that has been constructed by humans for some purpose or another" (4). This object centred account of affect argues that the technological artefact, like the urban spaces that Thrift (2004, 68) refers to in his work, are engineered by humans to "… invoke an affective response" within specific contexts.

Whilst affect can be engineered into artefacts, how it travels once it reaches the (potential) user becomes less certain to the designer/s of the artefact in question. As Ash (2014, 6) argues, the artefacts potential, "… becomes distributed between the designer … as well as the associated milieu in which the object is placed … which the designer has no control over." However, importantly whilst the "… affective response can clearly never be guaranteed, the fact is that this is no longer a random process either …" (Thrift, 2008, 187) and we can consider how affect is engineered into artefacts to shape 'possibilities' for individuals lives within the context of their use. This means, in taking an object centred understanding of affect, examining both the material components of the artefact and its capacity to affect *as well as* the environment or ecology in which the object is placed (Ash, 2014), the 'networks of interdependencies' that Oosterlaken (2011, 431) refers to in taking a CA to design. In doing so we can examine users anticipated embodied affective experiences, at the point in which they are expected to come into contact with the intervention.

4. Methodology

This paper examines the following two research questions: (1) How has the intervention been constructed spatially to respond to the lives of LGBT young people and enhance their capabilities?; and (2) What is the expectation of the designers about the wellbeing outcomes of those who are participating in the service? The focus of this study is on how the intervention is constructed and the way that affect is engineered into the design of a resource that responds to the needs of LGBT youth within the region.

This study draws on ethnographic field notes taken from late 2013 to early 2015 during the construction of the intervention, as well as program documentation and semi-structured in-depth interviews with 6 developers of the intervention.

My participation in the development of the intervention was one of an 'insider' as I took on a 'Monitoring and Evaluation Consultant' role within the organisation. The study took the form of a multi-site ethnography (Hannerz, 2003; Marcus, 1995) that took a "… form of (geographical) spatial de-centeredness" (Falzon, 2012, 2) in the sense that I, as an 'insider,' moved between and across the on/offline spaces with subjects as they participated in the design and construction of the intervention. During the period of data collection I participated in face-to-face meetings and events in both Thailand and the Philippines, as well as participated in online weekly staff meetings, individual meetings and project-related meetings with staff based in Singapore, Indonesia, Thailand, the Philippines and Malaysia. The intervention documentation, important for the construction of the resource, was both developed and (re)shaped during these meetings, and included: strategy

documents, internal proposals, project notes, and funding related documents; as well as documentation developed for the content of the intervention. The research undertaken included a thematic analysis of this documentation.

From this analysis several key themes emerged. This included themes related to queer bodies in the region and their experiences with risk: stigma, discrimination, criminalisation and disconnection. These concerns were entangled with design considerations, with themes emerging of privacy and safety, data security, design(er) responsibility and legal concerns.

To draw out these key themes I undertook six in-depth semi-structured interviews with subjects who were involved in the design and development of the intervention. Four interviews were conducted via *Skype*, whilst the other three were conducted in offline settings. As Morris (2015, 5) argues, the interview process '… gives the researcher access to an interviewee's thoughts, reflections, experiences, memories, understandings, interpretations and perceptions of the topic under consideration.' It was in these interviews that I sought to explore the participants' understanding of the intervention through drawing on the themes that emerged from the existing data.

Data collection had ethics approval from the University of Technology, Sydney and is part of a broader study exploring technology in community development settings in East and South East Asia.

4.1. The intervention

The web-application ('web-app') is the main component of the intervention (see below Fig. 1) developed by a regional community development organization based in Manila, Philippines. The organization has 10 program associates and several consultants.[2] It has been developed for LGBT young people (<30 years) who are living in the primary sites of Jakarta, Kuala Lumpur, Metro Manila, Singapore, Bangkok; and secondary sites[3]: Phnom Penh, Hanoi, Beijing, Kathmandu and Ulaanbaatar.

The intervention draws on the CA and its central focus is to enhance capabilities and wellbeing. The central component of the intervention is the web-app, which is the focus of this study. It has 5 components: A 'knowledge base' that provides factsheets to users about issues related to identity and sexuality; A 'services map' which provides information about, and opportunities to read ratings and comments about legal, health and social services; A 'Question and Answer' functionality, that allows users to ask questions to their peers, who can provide answers and vote on answers, which is moderated by community managers; A 'help-desk' that provides direct connection to peer support, and referrals to services; and a series of videos that provide visual narratives of people living with diverse sexual orientations and gender identities, created by filmmakers from around the region. The content is multilingual, insofar as it is available in the following languages: Thai, Bahasa Malay, Bahasa Indonesian, English and Simplified Chinese.

It is important to note that the web-app is not, as one staff member put it, a '… *stand-alone application*' but is entangled with other on/offline spaces. Thus the intervention as a whole incorporates both the web-app *and* social network services, and offline events. Where applicable I will refer to each element of the intervention, however the focus of this paper is primarily on the

development and design of the technological artefact: the web-app.

5. LGBT youth, stigma and risk: creating safe(r) spaces for LGBT young people

One of the recurring themes throughout the development of the web-app is on 'safety' and 'safe(r) spaces.' As articulated in the public strategy document *Connecting the Dots*, the intervention seeks to provide "… safe spaces for young people to reach out to their peers and build communities, enabling individuals to share knowledge and provide mutual support for each other" (5). Whilst I will focus later on the specific capabilities that are expected to be enhanced, the focus on 'safe spaces' as enabling environments here is particularly important for understanding the affective relationship users are anticipated to have with the technological artefact.

5.1. Designing for affect: privacy as embedded in functionality

The site developers symbolically construct the web-apps to respond to concerns of risk. The emphasis placed on developing a 'safe(r) space,' comes from a 'user-centred approach' to design, which, common in recent ontological approaches to technology development, places the user as the subject of design (Redström, 2006). In the context of this intervention it means, as one male staff member explained:

"… *putting the user at the centre of the design process so that we're solving the problem for that user …*"

The 'user' here, as Redström (2006, 129) reminds us "… is something that designers create." Drawing on a variety of sources of data, including formative research with young people, the internal discussions focus on the design of the web-app around solving, as the quote above suggests, a problem for the user. This specifically is focused on *'pain points'*, a term used internally within the organisation to articulate the immediate concerns the (potential) users are expected to be experiencing related to having an LGBT identity, behaviour and/or desires. As one male staff member articulated:

"… *I think that we work from a user centred perspective … we work to ease the pain for the user and that's kind of the design thinking is just like how we can do that in a way that's effective …*"

'Pain' and 'pain points' here generally refer to risk: risk from families, their peers, and from the state, which police sexuality and gender. Thus, it is anticipated that the users who are most likely to engage in this intervention are those ""*Young LGBTs who feel disempowered by lack of access to services and support for SOGI[4]-related barriers*" (Annual Meeting Notes, May 2014). In doing so the approach focuses on the 'barriers' that effect the realisation of capabilities, and human wellbeing, for diverse LGBT subjects who experience forms of risk that leave them with a lack of access to important services and support.

In responding to these concerns there is an emphasis on creating a secure *'safe(r) space'* for those who have the capital to access it. This emphasis on safety represents an engagement in the symbolic production of a *'trustworthy'* and *'supportive'* space. Decisions made at both the back-end of the site (such as through

---

[2] The organisation receives funding from a variety of sources (including internal funding through their for-profit arm). The primary funder is the UNDP.

[3] Secondary sites are those sites that will be the focus of program delivery from 2016 onwards, but have been taken into consideration in the planning and development of the web-app.

[4] 'SOGI' here refers to 'sexual orientation and gender identity,' and gets used interchangeably in the development of this intervention with SOGIE ('sexual orientation, gender identity and expression') and queer/LGBT (used in similar ways to this paper).

Fig. 1. The BE homepage.

development decisions about the storage of data and the chosen URL) to front end decisions (such as the content on the site) are designed to alleviate concerns of the user *and* create the *affective experience* of safety. This has an impact on the coding and infrastructure supporting the tools, and the development of content and internal policies supporting their implementation.

5.2. Web-app back-end design considerations

In terms of the 'back-end' of the site or the 'server,' one of the most important concerns for the organisation is the security of user data. This is a persistent theme, and concern within the organisation's discussions about the web-app. In part this is a response to broader concerns around surveillance by state actors. This concern is addressed in several ways.

Firstly all user data that is captured, including internet protocol (IP) addresses and any login details and information user/s provide to the organisation, is stored in a physical server outside the region, rather than it being accessible to people and state institutions within the region.

Furthermore, discussions around the confidentiality of 'user data' are also of prime concern within the organisation. This is particularly apparent in the internal *Code of Conduct* document that outlines the importance of securing and maintaining the confidentiality of user data. Importantly the de-identification of any data shared internally within the organisation is outlined in the document. As it states, all electronic exchanges with users must be ' … kept confidential within the organisation' and 'failure to abide by

these terms will be grounds for disciplinary actions and/or termination' (Code of Conduct Feb 2015, p.14). Furthermore all digital records are expected to be ' … maintained in a secured and encrypted storage environment' and when these ' … records are no longer classified as active by the duty manager' these will be 'archived and encrypted with additional secured measures' (Code of Conduct Feb 2015, p.16).

This concern for safety of data at the back-end of the site is also extended to the uniform resource locator (also known as the URL, or web address) of the site, which has, in previous studies (Buhi et al., 2009) been linked to users perceived credibility of a site. Whilst the use of URL's with specific country codes, such as '.my' for Malaysia, or '.id' for Indonesia, present opportunities to locate organisations within each geographic space, a decision was made to use a general non-country specific URL to avoid being "*subject to the media laws and regulations within these countries borders*" (male staff member). As this male staff member put it: "*… importantly '.net'[5] allows us not to be controlled by certain media regulations per country codes … This is a greyspace of the media.*" These laws can be, and are potentially problematic, for instance, in Indonesia the Ministerial Decree No. 19/2014 refers to the 'handling of negative Internet content' (Perdani, 2014), and *has* been used to block content, where content relates to "religious issues and those related to sexuality and gender—for example, local lesbian, gay, bisexual and transgender community websites—among other content categories" (Poetranto, 2014). In Singapore, under the Broadcasting Act (Cap. 28), the Internet Code of Practice, Section 4.2 E indicates that any material which 'advocates homosexuality or lesbianism' should be taken into account when determining what material should be prohibited online (Internet Code of Practice, 2015). In doing so it represents a threat to operating and showing LGBT-related content online. This concern was articulated by one female staff member:

> "*I think because uhh we work in the SE Asia region umm where there are terrible laws in terms of regulation of like online spaces … regulation of physical spaces umm so I do foresee that as a threat and a security risk umm and how that's going to impact different people as well … so I do think that is one big challenge [of] the social-political environment that we are working in …*"

5.3. Web-app front-end design considerations

In comparison, the 'front-end' actions are used with the aim to immediately create the affective experience of security and control in the (potential) user. Firstly, the framing of the site as a 'web-app' is important. As one staff member pointed out, it ' … *implies a stand-alone app on an individuals phone*' and gives the user the impression ' … *of being in control of privacy.*' This is built into the marketing of the program, through calling it a web-application or web-app, staff anticipate that users will associate it with an 'app' on their phones, which for many young people is perceived as something they can control, particularly when it comes to privacy (Madden et al., 2013).

Furthermore this sense of privacy is also evident through the '*Concerned About Privacy*' link, which appears in the top left hand corner of the web-app homepage (see below Fig. 2), linking the user to more information about how the space takes privacy seriously, and undertakes measures to secure data.

Once this link is clicked on the user is taken to another page that indicates that:

Fig. 2. Example of the link to privacy on the BE web-app homepage.

You have full control over your privacy on BE.
None of your data will be shared with other social networking platforms (eg. Facebook, Twitter, etc) or organisations, without your prior consent.
The team behind BE are committed to delivering an experience that is user-friendly and easy-to-use.[6]

Importantly this provides the perception of being in '*control*' and that '*your data*' is secure as part of the overall user '*experience.*' The affect this is meant to generate when the user comes into contact with it is a feeling of security and a sense of privacy. As previous studies (Davis and James, 2013; Marwick et al., 2010) indicate young people consider both privacy and a sense of control important when engaging online, and privacy is particularly important in relation to seeking information about sexuality (Selkie et al., 2011; Hillier et al., 2012). It implies young people are in control of their experience on the web-apps, and that they have agency in managing and maintaining data. The importance of this cannot be understated, particularly for those experiencing and at risk of stigma and discrimination (Hillier et al., 2010; Robinson et al., 2014) due to the real (or at least perceived) fear of the repercussions that could come from their participation in these spaces. As one female staff member indicated "*… for the users they need knowledge … they need information and they need it to be confidential … *" This focus on confidentiality results in the construction of a service that uses symbolic markers to generate the affect of safety, trust and security in the web-apps.

It is apparent that this affect of safety and privacy is meant to become more apparent the deeper the participant goes into the web-app. For instance the user/s must register to the web-app to access its features beyond the knowledge base (i.e factsheets). This includes agreeing to' … *the purpose, values, terms of use and codes of conduct*' and, as part of this process, acknowledging the statement that an individual user has ' … *control over the privacy settings of their profile, and can choose to remain anonymous*' (*Login page*).

5.3.1. Signs, symbols and cumulative value: the expected affective response

The multiple symbols and objects presented as part of the intervention, at both the back-end and front-end of the site, aim to cumulatively generate an affective experience that is important to the intervention. Ahmed (2004, 45) argues that "Affect does not reside in an object or sign, but is an effect of the circulation between objects and signs" which increases in value as signs circulate. The

---

[5] '.net' was used at the time of the study, however this has since changed. Though it remains non-country specific.

[6] Note: Text from the BE web-application: http://www.being-me.net/privacy/concerned-about-privacy/(accessed Dec 2014).

repetition of symbolic markers of safety, such as the secure login protocols, and information on the web-app, work together to accumulate value. They are used to 'capture' the (potential) users attention (Ash, 2012, 3—4), and invoke the required 'affective response' (Thrift, 2004) through the 'rippling effects' and 'sticky' associations of the circulation of objects and signs (Ahmed, 2004, 45).

The culmination of these signs is meant to engineer an affective experience of 'privacy,' 'safety,' 'security' and 'trust' through the arrangement of the technological artefact. In doing so the design incorporates elements that create an (imagined) border of trust and security to respond to the contextual issues of safety, which is meant to keep (potential) users accessing and participating in the web-app. Thus the interaction with the artefact creates "(re)actions or relations of 'towardness'" (Ahmed, 2004, 8) to the artefact itself. In doing so the intervention enhances the users capability to have control over their personal information in this space and, subsequently, opens up the possibility of enhancing other capabilities.

6. Enhancing capabilities: (Sub)cultural knowledge and social connection

Capabilities here are important to the extent that LGBT young people in these regions often have limited capabilities due to the existing structural barriers. As discussed the primary concern that is articulated throughout this intervention is on LGBT young people's lack of access to information and support, which emerged through the negotiations and discussions, as well as the internal data-gathering, that took place as part of the development of the artefact. Whilst the components of the web-app are varied there are two primary capabilities that the intervention seeks to provide LGBT youth: 1) Enhanced knowledge of diverse (sub)cultural knowledge and representations of sexuality; and 2) Opportunities for enhancing social connection.

(Sub)cultural knowledge here can be understood as the resources and support shared within queer online spaces (Hanckel and Morris, 2014; Munt, Bassett, and O'Riordan, 2002). As one male staff member indicated, the information and resources provided should:

"… speak to daily life of young people who are coming out. Young people who are trying to grapple with the issues of their gender and sexuality and how they want to interact with each other. How they want to date. How they want to learn about sex …"

In this way the knowledge on the platform is meant to be relevant to LGBT young people's everyday experiences, as well as respond to the information that LGBT young people want. The intervention provides information in diverse ways, in the form of factsheets (knowledge base); a video series, user generated information (Question and Answer) and also connection to further professional support (Services Map; Referral Desk). Importantly, the aim of focussing on (sub)cultural knowledge is for the overall wellbeing of LGBT subjects. As one female staff member indicates:

"… the impact should be they get more knowledge and [become] more clear and more confident about how can they uh make many decision in the future about their lives …"

Thus this increased (sub)cultural knowledge is considered important to the extent that it is accessible and that youth can choose whether, and how they can incorporate it into their lives. This focus is evident also in the *Connecting the Dots* strategy report. As the report outlines one of the primary aims of the intervention is

to "… create and distribute originally produced knowledge products and tools that help raise understanding of health and human rights information" (19) so that LGBT young people can, as the staff member above indicated, 'make many decision[s]' about their lives. Important also, as a transnational web-app is the ability to access diverse representations of LGBT desires, attractions and behaviours, and provide information and narratives that resonate for LGBT youth in a number of different contexts. This is evident, for instance, in the way one male staff member reflects on how the diverse videos might be consumed:

"… I think the video that we have so far show honest … interactions of individuals who are confronted with the issues and they share their side of the story, the pro and cons and … that appeal to people you know that the story is genuine … the story is honest … the story is really straight to your face and the different videos are from different culture but I hope that users from different countries is able to see or maybe can understand they themselves from their own country can grapple with the issues …"

This content is important, and is meant to be diverse staff-generated content *and* user-generated content. In reference to the Question and Answer feature, one male staff member explains that he is *"… not expecting uniformity but diversity"* to emerge in the representations of sexuality/gender identity. Thus once the user is engaging with the platform they have *"greater access to resources"* and access to "*diverse discourses*" of identity and how to approach the concerns that they are experiencing. It has been designed so that multiple answers can emerge to the questions posed by other users. Diversity is important here, and is also a central tenant of the CA (Robeyns, 2005), which takes into account a "consideration of interpersonal variations among human beings … in that it explicitly distinguishes different spaces of equality" (Zheng, 2007 n.p). It is used here, in the design of the space, to symbolically illustrate to users that multiple subject positions and responses to LGBT-specific situations are possible. As other work on queer forums (Hanckel and Morris, 2014) has found, diverse (and at times dialectical) responses to questions online can and do emerge and it provides young people with information that they can incorporate into their lives based on their own circumstances, around themes, for instance, of coming out to family and friends and dealing with discrimination and violence.

The mechanisms within the platform have also been developed so that user/s can interact and engage with each other in peer-based learning, and connection across the web-app. The *Connecting the Dots* strategy refers to this process of knowledge exchange as the ' … 'crowdsourcing' of peer support' (Connecting the Dots Strategy Document, p.5). As previous work has indicated 'self-aware' or experienced online community participants in queer spaces play an important role, in sharing information with others within the community (Thomas, 2002; Marciano, 2011; Hanckel and Morris, 2014). This is about sharing resources and experiences as the user is expected to

… share their experience with another user … It's like learning from another people's experience. It's the best way … to get information … yeah and they provide information about the service … information about the clinic or the counselling service for people (Female, Staff Member)

The references in this quote are to the features that allow youth to rate and discuss their experiences living as LGBT youth. In doing so, this creates further opportunities for connection. It is meant to provide 'a sense of community' (Connecting the Dots Strategy

Document, p.5), and is seen as playing an important role in creating diverse content.

7. Conclusion

The findings indicate that engineering affect into the design of the technological artefact is important, not only for bringing users into the artefact, but also for the barriers that it addresses. The artefact, is an object that is meant to "… generate and transmit affects …" (Ash, 2014, 2) of 'safety' and 'trust' through its design, which responds to the barriers of risk, stigma and discrimination present in the on/offline lives of LGBT young people. In doing so, the technological artefact incorporates mechanisms that work to reduce real risks, and provide symbolic representations, affective markers, of 'safe(r) space.' These measures, both real and symbolic, target the (potential) user's experience, with expectations that it will generate feelings of 'privacy,' 'safety,' 'security' and 'anonymity.'

The affective markers here are important for the affective intensities that they are expected to generate when they come together. The cumulative effects of the affective markers engineered into the construction of the artefact create 'rippling effects' that are 'sticky' as these signs circulate, in the way that Ahmed (2004) describes. In doing so the components are constructed to 'stick together' to facilitate a cumulative experience of a 'safe(r)' space, imbued with trust, security and support onto the bodily experiences of LGBT young people in Asia.

The engineered affect here is important to the extent that it creates an enabling and 'safe(r) space' for enhancing capabilities, and the agency of LGBT youth. The implication here is that greater knowledge and connection to support is meant to lead to greater agency to make decisions which impact the possibilities of users lives, and, in turn, their wellbeing. Thus the cumulative affective experience is meant to create a 'safe(r) space' for youth to understand their world and the expectation is that with increased agency, an important end goal of community development projects (Bhattacharyya, 2004), young people can use the enhanced capabilities to (re)negotiate their world/s.

Furthermore, the affective markers of 'safer space' are important for the potential they have to attach people to the platform in an ongoing capacity. In Paasonen's (2015, 92) study on the affective intensities within online exchanges she argues that affective intensities have the potential to "… attach people to particular platforms, threads and groups" (92). In a similar way the engineered affective intensities are meant to leave an affective imprint. Ahmed (2004, 6) discusses this in terms of leaving an impression, which she considers as "… an affect which leaves its mark or trace" (6). For Ash (2014) he refers to this as the 'affective afterlives' of technical objects. This imprint of affect is considered important for bringing the user back to the artefact to contribute, learn, and (re)connect with others, with the intention to bleed back in and out of the existing on/offline places that they inhabit. Whilst the impression of affect, and the artefacts capacity to affect is likely to be dependent on the intersectional positions queer young people's bodies occupy across different spaces, the intention of the design(ers) is to make an impression onto the bodies of queer youth. In so doing it allows for the possibility of ongoing engagement with the 'safe(r) space' within varied contexts of risk in Asia.

The inquiry into this intervention helps us understand how ICT resources are designed within contexts of risk. However further research is required to understand the embodied affect that takes place within the user vis-à-vis the expected affect, and how this travels in and across spaces, and particularly into the lifeworlds of those accessing intervention/s. Furthermore greater examination of how unanticipated affects shape and (re)create space is important

for (re)thinking design potentialities. In doing so, we can further understand the potential possibilities for technological artefacts and their contribution to overall wellbeing.

References

Ahmed, Sara, 2004. The Cultural Politics of Emotion. Routledge.

Alkire, S., 2010. Development: 'a misconceived theory can kill. In: Morris, C. (Ed.), Amartya Sen: Contemporary Philosophy in Focus. Cambridge University Press, pp. 191–219.

Ash, J., 2012. Attention, videogames and the retentional economies of affective amplification. Theory, Cult. Soc. 29 (6), 3–26. http://dx.doi.org/10.1177/0263276412438595.

Ash, J., 2014. Technology and affect: towards a theory of inorganically organised objects. Emot. Space Soc. 14, 84–90. http://dx.doi.org/10.1016/j.emospa.2013.12.017.

Bass, J.M., Nicholson, B., Subhramanian, E., 2013. A framework using institutional analysis and the capability approach in ICT4D. Inf. Technol. Int. Dev. 9 (1), 19–35.

Bhattacharyya, J., 2004. Theorizing community development. Community Dev. Soc. J. 34 (2), 5–34. http://dx.doi.org/10.1080/15575330409490110.

Buhi, E.R., Daley, E.M., Fuhrmann, H.J., Smith, S.A., 2009. An observational study of how young people search for online sexual health information. J. Am. Coll. Health 58 (2), 101–111. http://dx.doi.org/10.1080/07448480903221236.

Davis, Katie, James, Carrie, 2013. Tweens' conceptions of privacy online: implications for educators. Learn. Media Technol. 38 (1), 4–25. http://dx.doi.org/10.1080/17439884.2012.658404.

Deleuze, G., 1988. Spinoza: Practical Philosophy. City Lights Books.

Dyson, S., Smith, A., Mitchell, A., Dowsett, G., Pitts, M., Hillier, L., 2003. Don't Ask Don't Tell. Hidden in the Crowd: the Need for Documenting Links between Sexuality and Suicidal Behaviours Among Young People. Report on the Same-sex Attracted Youth Suicide Data Collection Project. La Trobe University. Australian Research Centre in Sex, Health and Society, Melbourne Australia. http://arrow.latrobe.edu.au:8080/vital/access/manager/Repository/latrobe:21382.

Falzon, Dr Mark-Anthony, 2012. Multi-sited Ethnography: Theory, Praxis and Locality in Contemporary Research. Ashgate Publishing, Ltd.

Hanckel, B., Garcia, L., Santos, G-M., Manalsatas, E., 2014. Assessing needs and capabilities: towards an ICT resource to support HIV-positive gay men and other MSM in Southeast asia. Digital Cult. Educ. 6 (3), 183–196.

Hanckel, B., Morris, A., 2014. Finding community and contesting heteronormativity: queer young People's engagement in an Australian online community. J. Youth Stud. 17 (7), 872–886. http://dx.doi.org/10.1080/13676261.2013.878792.

Hannerz, U., 2003. Being there… And there… And there! reflections on multi-site ethnography. Ethnography 4 (2), 201–216. http://dx.doi.org/10.1177/14661381030042003.

Hart, C.S., 2012. Aspirations, Education and Social Justice: Applying Sen and Bourdieu. Bloomsbury Academic, London.

Hatakka, M., 2013. Back to basics - why (Some) ICT4D projects still struggle. In: Proceedings of the 12th International Conference on Social Implications of Computers in Developing Countries, pp. 409–421 (Ocho Rios, Jamaica).

Hillier, L., Jones, T., Monagle, M., Overton, N., Gahan, L., Blackman, J., Mitchell, A., 2010. Writing Themselves in 3: the Third National Study on the Sexual Health and Wellbeing of Same Sex Attracted and Gender Questioning Young People. La Trobe University. Australian Research Centre in Sex, Health and Society, Melbourne Australia.

Hillier, L., Kurdas, C., Horsley, P.A., 2001. It's Just Easier: the Internet as a Safety-net for Same Sex Attracted Young People. La Trobe University. Australian Research Centre in Sex, Health and Society, Melbourne Australia. http://arrow.latrobe.edu.au:8080/vital/access/manager/Repository/latrobe:21096.

Hillier, L., Mitchell, K.J., Ybarra, M.L., 2012. The internet as a safety net: findings from a series of online focus groups with LGB and non-LGB young people in the United States. J. LGBT Youth 9 (3), 225–246. http://dx.doi.org/10.1080/19361653.2012.684642.

van den Hoven, J., 2012. Human capabilities and technology. In: Oosterlaken, I., van den Hoven, J. (Eds.), The Capability Approach, Technology and Design, Philosophy of Engineering and Technology 5. Springer, Netherlands, pp. 27–36.

Internet Code of Practice, 2015. Media Development Authority Singapore. Accessed February 18. http://www.mda.gov.sg/RegulationsAndLicensing/ActsCodesOfPracticeAndGuidelines/Pages/ActsCodesofPracticeandGuidelines.aspx.

Itaborahy, L.P., Zhu, J., 2014. ILGA: ILGA's State-sponsored Homophobia Report 2013, 8. Accessed January 14. http://ilga.org/ilga/en/article/o5VlRM41Oq.

Madden, M., Lenhart, A., Cortesi, S., Gasser, U., 2013. Teens and Mobile Apps Privacy. Pew Research Centre.

Manalastas, E., 2013. Sexual orientation and suicide risk in the Philippines: evidence from a nationally representative sample of young filipino men. Philipp. J. Psychol. 46 (1), 1–13.

Marciano, A., 2011. The role of internet newsgroups in the coming-out process of gay male youth: an Israeli case study. In: Dunkels, E., Franberg, G., Hallgren, C. (Eds.), Youth Culture and Net Culture: Online Social Practices. Information Science Reference, Hershey, PA, pp. 222–241.

Marcus, G.E., 1995. Ethnography In/of the world system: the emergence of multi-sited ethnography. Annu. Rev. Anthropol. 24 (January), 95–117.

Marwick, A.E., Murgia-Diaz, D., Palfrey, J.G., 2010. Youth, Privacy and Reputation (Literature Review). SSRN Scholarly Paper ID 1588163. Social Science Research Network, Rochester, NY. http://papers.ssrn.com/abstract=1588163.

Morris, A., 2015. A Practical Introduction to In-depth Interviewing. SAGE Publications Ltd.

Munt, S.R., Bassett, E.H., 'Riordan, K.O., 2002. Virtually belonging: risk, connectivity, and coming out on-line. Int. J. Sex. Gend. Stud. 7 (2—3), 125—137. http://dx.doi.org/10.1023/A:1015893016167.

Murphy, C., Gardoni, P., 2012. Design, risk and capabilities. In: Oosterlaken, I., van den Hoven, J. (Eds.), The Capability Approach, Technology and Design, Philosophy of Engineering and Technology, vol. 5. Springer, Netherlands, pp. 173—188.

Nichols, C., Dong, A., 2012. Re-conceptualizing design through the capability approach. In: Oosterlaken, I., van den Hoven, J. (Eds.), The Capability Approach, Technology and Design, Philosophy of Engineering and Technology, vol. 5. Springer, Netherlands, pp. 189—201.

Oosterlaken, I., 2009. Design for development: a capability approach. Des. Issues 25 (4), 91—102.

Oosterlaken, I., 2011. Inserting technology in the relational ontology of Sen's capability approach. J. Hum. Dev. Capab. 12 (3), 425—432. http://dx.doi.org/10.1080/19452829.2011.576661.

Oosterlaken, I., 2014. Human capabilities in design for values. In: van den Hoven, J., van de Poel, I., Vermaas, P. (Eds.), Handbook of Ethics, Values and Technological Design. Springer, Dordrecht.

Paasonen, S., 2015. Chapter two: a midsummer's bonfire: affective intensities of online debate. In: Hillis, Ken, Paasonen, Susanna, Petit, Michael (Eds.), Networked Affect, pp. 89—139.

Paasonen, S., Hillis, K., Petit, M., 2015. Introduction: networks of transmission: intensity, sensation, value. In: Hillis, Ken, Paasonen, Susanna, Petit, Michael (Eds.), Networked Affect. MIT Press, pp. 11—87.

Paradis, E., 2016. Searching for self and society: sexual and gender minority youth online. In: Wilson, A., Bloomfield, V. (Eds.), Voices of LGBTQ Students and Teachers: Changing the Culture of Schooling. Paradigm Publishers. Forthcoming.

Perdani, Y., 2014. Ministry Allows Vimeo, Keeps Ban on Pornography. The Jakarta Post. http://www.thejakartapost.com/news/2014/11/07/ministry-allows-vimeo-keeps-ban-pornography.html (accessed Dec 5).

Poetranto, I., 2014. End Outdated Internet Controls, Minister Rudiantara. The Jakarta Post. Accessed December 5. http://www.thejakartapost.com/news/2014/11/15/end-outdated-internet-controls-minister-rudiantara.html.

Pratt, R.J., Buzwell, S., 2006. It is who I Am': experiences of same sex attracted youth within Australian secondary schools. Gay Lesbian Issues Psychol. Rev. 2 (1), 12—20.

Redström, J., 2006. Towards user design? on the shift from object to user as the subject of design. Des. Stud. 27 (2), 123—139. http://dx.doi.org/10.1016/j.destud.2005.06.001.

Robeyns, I., 2005. The capability approach: a theoretical survey. J. Hum. Dev. 6 (1), 93—117. http://dx.doi.org/10.1080/146498805200034266.

Robinson, K.H., Bansel, P., Denson, N., Ovenden, G., Davies, C., 2014. Growing up Queer: Issues Facing Young Australians Who Are Gender Variant and Sexuality Diverse. Young and Well Cooperative Research Centre, Melbourne. http://www.youngandwellcrc.org.au/knowledge-hub/publications/growing-queer/.

Selkie, Ellen M., Benson, M., Moreno, M., 2011. Adolescents' views regarding uses of social networking websites and text messaging for adolescent sexual health education. Am. J. Health Educ./Am. Alliance Health, Phys. Educ. Recreat. Dance 42 (4), 205—212.

Sen, A., 1999. Development as Freedom. Oxford University Press.

Sen, A., 2009. The Idea of Justice. Harvard University Press.

Taylor, J., Dwyer, A., 2014. Chapter 14: queer youth Research/ers: a Reflexive account of risk and intimacy in an ethical (Mine)Field. In: Baker, S., Robards, B., Buttgieg, B. (Eds.), Youth Cultures and Subcultures: Australian Perspectives. Ashgate Publishing, Ltd, pp. 241—252.

Thomas, A.B., 2002. Internet Chat Room Participation and the Coming-out Experiences of Young Gay Men: a Qualitative Study. Doctoral Thesis, The University of Texas.

Thoreson, R., 2011. Capably queer: exploring the intersections of queerness and poverty in the urban Philippines. J. Hum. Dev. Capab. 12 (4), 493—510. http://dx.doi.org/10.1080/19452829.2011.610783.

Thrift, N., 2004. Intensities of feeling: towards a spatial politics of affect. Geogr. Ann. Ser. B Hum. Geogr. 86 (1), 57—78.

Thrift, N., 2008. Non-representational Theory: Space, Politics, Affect. Routledge, Milton Park, Abingdon, Oxon; New York, NY.

UNDP, 2014a. Being LGBT in Asia: Thailand Country Report (Bangkok).

UNDP, 2014b. Being LGBT in Asia: the Indonesia Country Report. 2014 (Bangkok).

UNDP, 2014c. Being LGBT in Asia: the Philippines Country Report. 2014 (Bangkok).

UNDP, 2014d. Being LGBT in Asia: Viet Nam Country Report. 2014 (Bangkok).

Zheng, Y., 2007. Exploring the value of the capability approach for E-development. In: Paper Presented at the 9th International Conference on Social Implications of Computers in Developing Countries, Sao Paulo, Brazil.

Zheng, Y., 2009. Different spaces for e-development: what can we learn from the capability approach? Inf. Technol. Dev. 15 (2), 66—82. http://dx.doi.org/10.1002/itdj.20115.