Digital Humanities and Scholarly Research Trends in the Asia–Pacific

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Chapter 10
Performing the Internet:
Post-Internet Folklore

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ABSTRACT

This chapter imagines alternative possibilities for digital humanities scholarship. Beyond technological pragmatism, the inquiry instead points to a richer engagement with digital infrastructure that can occur through the application of software literacy and expanded cultural practices derived from speculative traditions of thinking and feminist internet criticism. New methodologies are introduced, providing experimental models of engagement that allow for distinctive forms of performative and the development of dynamic and diverse knowledge.

INTRODUCTION

Over the past decade, miniature computing devices with wireless antennae able to connect seamlessly to user-friendly digital platforms have entered the everyday lives of many Internet users. Once an elite, privileged or expensive form of information access, ubiquitous computing the availability of the Internet almost anywhere and anytime and being online, have both become mundane experiences for an increasingly large percentage of Singapore's population (and beyond). Similarly, the Internet has arguably become a site for archiving traditional cultural practices as well as the production and emergence of new ones. Likewise, knowledge production around software studies and digital humanities is *always already* emerging, continuously being formulated and negotiated; depending on the practitioners' level of engagement the developments in technology. As disciplinary backgrounds affect

what scholars bring to, and how they outline the field, these boundaries are fluid. Therefore, this chapter is couched in a methodology that defines how experiential digital literacy endeavors and experimental pedagogy validate radical diversity, and as a result, offers a thoroughly different communication premise. Through highlighting the importance of digital literacy among scholars in the new form of humanities and arts (programming and computing competencies) it argues that we should look beyond an instrumental approach to technological engagement, advocating for a feminist approach that challenges the official mode of knowledge production and dissemination over the Internet sanctioned by state and commercial interests. Addressing the computer as a processual medium where wired terrestrial and wireless extra-terrestrial communication takes place, one can imagine other transnational possibilities for twenty-first-century arts and humanities theories and practices. Willard McCarthy urges us to "turn for help to the arts because like digital humanities they are experimental and materially innovative" (McCarthy, 2014). As long as it does not matter, art is tolerated to be as radical as it wants. There are other performative ways to participate with other modalities of being, more-than-human life forms and systems and networks which allow people to intersect and form tangential assemblages with those of whom are both corporeally distant and local (Mauro-Flude, 2018). Beyond technological pragmatism, the inquiry instead points to a more comprehensive engagement with technology and hence shapes

Figure 1. Towards a Feminist Internet. (©2013, Nancy Mauro-Flude. Used with permission.)

digital humanities that can occur through the application of cultural practices from insightful traditions and subcultures that embrace feminist critical theory, experiential pedagogy in digital literacy and post digital culture.

When applied to the field of digital humanities, feminist critical theory addresses current technopolitics. "Is the 4th Wave of feminism is Digital?" asks Ragna Rök Jóns (2013) who further conjectures, that if it is so, it "would have to be in part discursive and would require a restructuring of legal, institutional, educational, economic, social, religious, geographical, corporeal and cultural barriers…". Fourth wave feminism has a particular history of chewing on the cables and fibers of control and domination, nodding to Angela Davis (2015) who reminds us that "radical simply means grasping things at the root". Therefore, it is proposed that one must refer to the (many) beginnings of culture when the notion of matriarchy was prominent and was said to be subsumed by patriarchy by the division of art, crafts, technologies and ritual.

First and foremost, the aim is to change the gender of technology, to eclipse the male dominance on the field of the Internet. This text acknowledges pioneering autonomous grassroots feminist server and tech projects such as: The Syster Server maintained by women, using free software, the collective acts as a nonviolent place to learn *nix system administration skills, host services and inspire others to do the same this project was developed by The Genderchangers Academy (GCA) a grassroots female led tech collective whom held skill-share meetings at the end of the 90s throughout Europe and whose activities have since proliferated across the globe (Mauro-Flude 2010). The name genderchangers is derived from a small piece of computer hardware that changes the sex of a computer cable. The metaphor was chosen to create awareness around the significant lack of women in the field of Information Technology. GCA's desire was change the dominant gender of people who use technology, and this is communicated in the events this community produces. An international collective of women who deal with computers the hard way, in the sense that in workshops the first step is to open up computer hardware, thereby demystifying machines by cataloguing their inner parts (Mauro-Flude 2015).

A feminist approach to digital literacy is unique - think digital literacy sewing circles - the modes of experiential learning expand into reflections on politics with an inter-sectional point of view and a non-teleological approach to skills sharing. For instance, during a meeting a focus group on system administration is quite content, to have a woman knitting in the background gleaning information, or a drag king workshop held alongside more hard-coding skills acquisition; teaching python programming language for instance. The undertaking focuses in particular on collective concept-making (and shaping) abilities of knowledge production and

Figure 2. Modem grrrl Sticker by RosieX (©2018, Nancy Mauro-Flude. Used with permission)

forms of creativity, by artists, scholars, programmers, and thinkers (and beyond) whose works respond to the emergent conditions of a networked world, a realm increasingly transmitted through fiber and code.

Before an explication of what performing the internet or post Internet folklore means, an acknowledgement of the apparatus, the servers upon which the Internet is built on must be made. The project would not be possible without its centerpiece the feminist server stack. In this case the server is feminist, meaning that addresses political issues around technological power relations of its maintenance. The server is run on a Debian operating system which is a Linux distribution and hence is open source, meaning that the source code is made available for users to modify and extend upon. Secondly, it provides a safe space for those that provide services for its community and counteracts the lack of autonomous structure on the internet. A conflict between experimentation in the former, and a need for reliability then arises but it is in this tension between thinking and doing, between reflecting and acting which brings together a feminist tech collective that does not pretend to have easy solutions for complex and probably insolvable problems. The feminist server is autonomous and grants agency to the community it was created for. It is a situated server, necessarily different from the typical ones regulated by a community outside of people's control. These initiatives have not been extensively considered because they operate under the radar of official culture. As a corollary, it is proposed that these

be validated in a postcolonial archive through which one can renegotiate matters of cultural diversity, beyond identity politics, in relation to institutional habitus. This is how the act of performing the Internet validates radical subjectivities, inherent to the realm of the networked culture and the human and non-human entities that populate its fibers and transmissions. This engenders an inquiry that reaches beyond general facts and into the technical minutiae of the potentials and limitations of this apparatus. Couched in specific case studies based in part on an ethnographic vignette, the author's research converges with digital culture, particularly in relation to experimental art and computer science.

Such reorientation and configurations are a welcome opportunity to point to the relative absence of technical savvy in digital humanities and communications departments, precisely when the daily encounter with increasingly obscured technologies embedded in built environments becomes standard and unconsciously embodied. By drawing further attention to the apparatus, new models of engagement are advocated, in order to provide a deeper understanding of the connections between policy and algorithmic industry in the arrangement of cultural concerns and apprehensions.

This case study is grounded in an empirical research undertaken by the author during 2016-8 namely in coordinating, supervising and developing courses and curating events for undergraduate students in Software Studies, Digital Humanities and Digital Culture for two years at the National University Singapore and ArtScience Museum Singapore. Notwithstanding *Writing for the internet: Internet Life and Lore in South East Asia*. (Kerr, E., Graham, C., & Mauro-Flude, N., 2018) in which the author co-curated and was dramaturg for the event, also conducted several field trips related to *Data, Territory, Infrastructure: Singapore and Beyond* (2017) a workshop led by the Institute for Culture and Society, Western Sydney University (Neilson, B, Rossiter, N, Notley, T with Pang, L., Harney, L., Mezzadra, S., Reading, A. & Sprenger, F).

BACKGROUND

Since the turn of the century, the Internet has become so deeply ingrained into everyday lives that contemporary 'life' is often not easily understood as distinct from it. In this context, the word Internet refers specifically to its role as a "communication technology" (Cantoni & Tardini, 2006 p.5). At the same time, its socio-technical complexity and the characteristics of the populations that use it (Lialina, 2018) are often rendered imperceptible, except in data visualization and often human efforts are in turning statistical interpellations into representations of "real life" something is lost. In short, Performing the Internet investigates practices that evade traditional

capture or measurement. In these contemporary media formats, the gestural act of scrolling and swiping, masked as leisure, is, in fact, voluntary servitude.

While many digital humanities practitioners address the computer as both a research tool and a study object, much emphasis rests to a great extent on the instrumental aspect. There is no doubt in the dynamic ways digital technology can be used to develop new methods for retrieval, documentation, and visualization of data. Bolter and Grusin's define "remediation" as "the representation of one medium in another" or "the formal logic by which new media refashion prior media forms" (1998, p.54) for instance, it is often the case that a video of a performance is not a simple registration, trace, or document of a pre-existing live performance but a revision, a re-purposing 'remediation' which we may include streaming life performance across the internet. The issue here is that is that many histories of twenty-first-century art forms, and their archives, including contemporary theatre, performance, and visual art, are often enforced by twentieth-century notions of category. For instance, while the photograph and the video remain the dominant modes of documenting performance, the arrival of the digital, and the post-digital has necessitated yet another rethink. Performance no longer avoids documentation, if indeed it ever did; it "splinters mutates and multiplies over time in the hands of various critical constituencies in a variety of media" (Bedford, 2012 p.78). Hence Rebecca Schneider has rewritten Peggy Phelan's dictum as "performance becomes itself through messy and eruptive re-appearance" (2011, p.102). In short, arguments have become more reductive over the past two centuries or more, shifting from the awe-inspiring memory palaces, to whether performance can be documented to how it is documented, where these documents are stored, distributed, and displayed, and what sort of spectatorship they ask of their current and anticipated audiences. In hindsight what becomes salient is how financial capital has become a fiscal menace to experimental performance. Beyond pragmatic archival telos transcending data analytics and the performance documentation vernacular, revisioning the affordances of text, in the broadest sense, may seem a radical method to propose but we must acknowledge that inherently digital humanities are an experimental practice (McCarthy, 2014).

Computers have assumed an increasingly significant role in the arts, social sciences, and humanities, not only supporting the automation of archival administrative processes, but also in the role of portals of communication inhabited by the bright and seductive Graphic User Interfaces of thinly veiled data harvesting systems where server stacks are situated in the guise of *The Cloud*. Traditional collective decision-making is thrown into high relief, revealing the fact that appreciating nuance in cultural production and consumption is now more important than ever. The feminist server stack projects' interest lies in challenging established methodologies and opportunities for innovation, particularly in the development of the concept of the knowledge commons, that is, places or services that communicate and interact

directly with broad audiences (Hess, 2015). These Internet folklore practices are widely subsumed by larger narratives of ICT development or informational democratization. In order to highlight the role of the commons, collective public values may have to guide the complex socio-technical web, which is often elided and misconstrued as the World Wide Web. It should be noted that despite the ubiquity of transcendent communication channels, control paradigms are experienced locally. In Singapore – a "vulnerable country's ongoing efforts to at once be a global city and a nation-state" (Graham, Kerr, Pang, & Fischer, in press), through which it is revealed that there is much-needed attention to tackling national policy before any of the suggestions in this text can be realized to their full potential. The benevolent dictatorship that the state embodies, sullies all user experience with platforms and infrastructure. To make this point more tangible, one example is if one were to perform live in a public space and simultaneously transmit this as a video stream to a host server on the Internet. If one hasn't alerted relevant government authorities and performs unlicensed and / or impromptu, it most likely will be construed as criminal act (Crete-Nishihata, M., Hilts, M., Knockel, J., Q. Ng, J., Ruan, L., Wiseman, G., 2016). The state control of the Internet and authoritarian regime "censorship," enforced by the Media Development Authority in Singapore is a serious problem and challenge that undermines the idea of multiplicity of Internet that the feminist server stack envisions and advocates.

This moment also then provides the opportunity to reenchant, redefine, reflect on the complications and possibilities of the "postcolonial archive" (Shetty & Bellamy 2000, after Spivak 1988), a concept that has yet to be widely taken up in post-digital culture. An archive is *always* already haunted by narratives of colonial imitation, derivation, and delay. The flurry to digitize contents from traditional sources of knowledge is self-assured with the confidence that the process of digitizing the archive's materials will produce theoretical insight. Murov & Mukuka oppose such actions on an ethical and cultural basis. Substantiating that the computer archive is not a neutral machine, the technology is biased towards the computerized society's knowledge system. The contend that digitization promotes a top-down knowledge system that emphasizes the individual and personal reasoning, a disparity to alternative knowledge systems which promote communal wisdom, community, and collectivity (Murov & Mukuka 2007, p.16).

To remedy this post-digital aesthetic imperative is concerned with approaches to art-making and conceptual frameworks that assume digitality, but its tools are raw ubiquity, embedded with *neo-slime*, embracing curious imperfection and mawkish materiality rather than a sterile digital essentialist ideal of perfection. Florian Cramer maintains "the post 'prefix' not as an antithesis (as e.g. in the pairing of terms modernism vs. postmodernism) but as the continuation of an argument (like in post-punk or post-colonialism)" (Cramer, 2013). Confronted with the plurality

of platforms that constitute postcolonial digital archives, we are charged to think not of archival practice but of performances, of the forms of knowledge produced through the affordances and limitations of their platform. In this way, it is proposed that a postcolonial archive, which has profound interdisciplinary content and by its nature is post-digital, is hosted on a feminist server and hence a feminist Internet.

A feminist Internet rejects the utilitarian deciphering of intent, and despite the logistical snags posed by its apparatus, there is no doubt that the contributing human and non-human actresses performing the feminist internet have an innate ability to decant the power of a data storeroom. This Internet is performed by a mycelial collective radical anarchist feminists acting in concert as a tensile network, an amalgam of material and immaterial distributions (see figure 2). Such assemblages, can potentially radically reconfigure the postcolonial archive, whereas "In post-digitality: the digital becomes a tangible experience" (Lund, 2017). Questioning the human-machine relationship, these propositions are considered from the perspective of operating from a creative practice-led research paradigm that possesses a "double ontology": simultaneously operating as artworks within the art world, and, crucially, as concrete interventions that start, below the radar of official culture.

POST INTERNET FOLKLORE AND THE FEMINIST SERVER STACK

The title of the article is 'post Internet folklore' aligned with Gabriel de Seta (2019) who suggests that as an analytical category theorists should no longer use the word culture, but 'folklore.' This is because users on sites like YouTube and Tumblr 'play with' slang and create a 'carnival-like' space that provides an extraordinary space in society to do so, "digital folklore cuts across the field of Internet research in the broadest disciplinary terms, existing at the crossroads of anthropology and folkloristics, media and cultural studies, aesthetics and design, art history and communication studies" (de Seta, 2019). As information is iteratively modified by each user, the ability transforming the archive with unparalleled immediacy, as for example, memes made from the same clip with new music or text on YouTube. From the cannon of mainstream digital folklore, the classic "CyberGoth Dance Party" meme also offers us a glimpse at the power of the Internet as a repository and its transcendental pull.

Devon Maloney (2018) from *The Verge* recalls "On September 7th, 2011, the internet was blessed" see Figure 3. The remixes feature alternative captions such as 'Goths Dance to Anything'. Even taken out of context the dancers seem to catch the beat of the traditional panpipes in the Spanish version of Kung Fu Fighting.

Figure 3. CyberGothDance Party Screenshot. (©2018, Nancy Mauro-Flude. Used with permission.)

Originally uploaded by YouTuber *gNarLu cEe*, on September 7th, 2011, with insightful instructions in l33t sp33k, "Leave FUNNY - WiTTY comments or else GTFO !!! Lock N Load - Blow Ya Mind (DJ Zany remix)". The video of young cybergoths dancing underneath an overpass gained over 4.2 million views and 11,800 comments in a five year period in a testament to the benefits of enjoyment and laughter's healing properties. This surrender to hilarity is not entirely malevolent. Memes hold the capacity to introduce youngsters to current affairs in a light-hearted manner and have become a channel to informally address and critique happenings in the political arena, which would not have been possible to write, in a formal article or blog post. Singaporean's are largely resigned to the top-down prescriptive approach where they typically adopt the "just do, don't ask" mindset. Lovink (2017) notes that "memes make politics more fun for youths." For the Singaporean youth, the populist nature of memes can in fact be refreshing, a reinvigorating way for the masses to re-engage in national affairs that many of them would otherwise have little interest in, doubling as a conduit in which metaphor and allegory can be utilized to give agency to opinions that are not otherwise tolerated.

Not a regulated to an official data set, but remediated repeatedly, in unremitting flux are the threads of the ghostly Kuntilanak or Pontianak story can be traced through personal anecdotes and ghost stories on web forums, digital graphic novels to YouTube video sightings. The female specter is potent in her hauntings, refusing fixity in annals of official culture, mutating in the digital realm of Internet folklore. Ligo (2018) describes a YouTube video manifestation of the "Pontianak at Bomba Quarters" (Star Online, 2018) from Malaysia, which shows a swing moving with nobody on it and an unidentified figure with long hair standing next to it. The

Figure 4. "Who writes the bloody networks of the living women?" Katrina Irawati Graham at Internet Life and Lore in Asia Workshop, Asia Research Institute (©2018, Nancy Mauro-Flude. Used with permission.)

Pontianak tears and disembowels its victim, the onlookers watch in horror and spread the story through radio, further embellishing its malevolence.

Filmmaker and writer Katrina Irawati Graham (2018) discusses the folklore of the 'Kuntilanak and the locus of authenticity in folklore in the digital space', raising questions of legitimacy and agency as to who can share oral history (see Figure 4). Also questioning why tragic female ghosts such as Kuntilanak and Pontianak are so prominent in Asian folklore, as pivot to discuss the wider issues surrounding feminism and historical imagery of Pontianak. Ligo (2018) writes of how the Singaporean version situates her as a reluctant ghost in the wild forest areas of Bukit Timah where her laughter, cries, and shrieks can now and then be heard. However, even the shapeshifting Pontianak has become mired in a patriarchal, neo-liberal logic, even while many efforts imagine themselves as being critical of such. A recurring instance of this is the way consumer culture and mainstream media portray ghostly female figures. It is the exact presence of such irony that hinders the progress of feminist efforts in Singapore. Just as the feminist plight in, alternative creative efforts that bring the feminist notions to life ought to be considered. The most compelling problem however lies in the very definition of the term itself, where "feminism is 'completely misunderstood' in Singapore – a nation in which some of its most public feminists are a mixture of 'rightwinged fundamentalists, women who oppress men,' and others who are anti-gay and antihuman rights" (Gwynne, 2012). Regrettable in Singapore the term feminism has been (mis)appropriated to

promote over-empowerment of women and other non-feminist political values, rather than equal standing of both men and women, creating an inherent paradox. The array of different readings of and contexts for critical theory or feminist media histories and digital humanities - through the main issue being identity formation that is, the figure employed such inhabitations are "invisible technologies" that are "pivotal in shaping everyday life and do so often through the body" (Michael, 2000 p.108). Aligning with the folkloric of shapeshifting, (the Pontianak in Malaysia and Kuntilanak Indonesia folklore), the Kuntilanak is traditionally known to be a voracious Vampire, rooted in the *kampungs* of Malaysia and Indonesia. It is contrary to the passive ghostlike manifestations of the damned but beautiful waif figure described in Singapore. Traditionally relying on word of mouth as a medium for the story's dissemination, Graham describes the futile act of searching for the origins of the myth on the Internet, the very medium which continues to perform the Kuntilanak (see Figure 4).

Making invisible things visible, connections between the presence of the supernatural and the politics of female artists working with technology; voices that have always been talking - but haven't always been heard, to be able to rewrite these archetypes, is exemplified in the narrative of soothsaying is continued in Nancy Mauro-Flude's *Aerials Cypher*, a custom access Wi-Fi portal/email performance, hosted on a feminist server, in which users are haunted by virtual entities (such as Pontianak, Kuntilinank or Matianak) that are in the process of gathering data to add to and inform their' feministic internet vernacular.

The intention was that users could only escape the haunting by submitting a ghost story that contributes to the "Aerials" archive. And while a typical Wi-Fi network was re-purposed, to become an augury of sorts, without explicitly being so, revealing how digital folklore can be collected by mundane technologies, it playfully extends on the maker's cultural aesthetic, making strange typical male dominated practices of hardware modding and system administration.

The mediums of poetic-speculative storytelling, software collage, Wi-Fi meshing, and assemblage addressed the entanglements of technology - on the one hand, the matter-of-fact demystification that technology affords; on the other, mystification - black box (that is, the ambiguous, unknown and immaterial nature of input and output code). Elaborating how these processes and networks are imbued with ambiguity, Deker (2018) "suggests that this is strategically used to create suspense, obfuscate existing systems and disrupt power structures...Taking the performative and interpretive roles conservators play into account". A striking contrast the prevailing instrumental tendency in digital scholarship, to stabilize their data beyond the tools they are using, to handle the knowledge they are forming and collecting as future cultural heritage.[1] Reappraising computer networks – the Internet - through a performative lens, the intention was to provide audiences with direct contact to the

Figure 5. Aerials Cypher Installation detail- Internet Life and Lore in Asia Workshop (©2013, Nancy Mauro-Flude. Used with permission.)
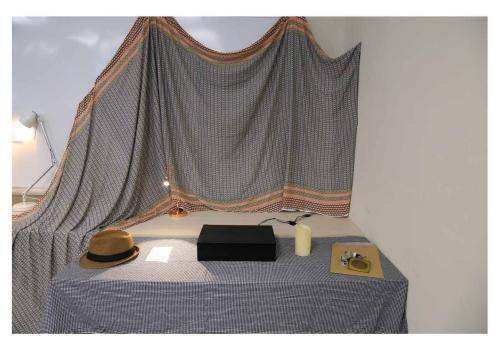

Figure 6. Internet Signal Extender devise Aerials Cypher Installation detail- Day 1 Internet Life and Lore in Asia Workshop (©2013, Nancy Mauro-Flude. Used with permission.)
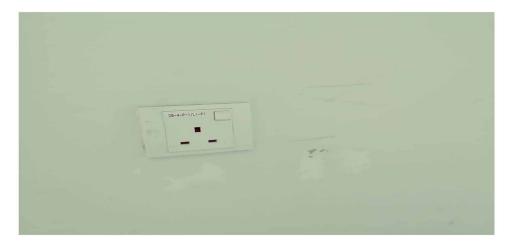
strategies used in networked space, guided by chatbots masquerading as 'matianak ghosts' who poetically illuminate the complexity of uninformed consent strategies typically used in online database user/client communications.

Aerials Cypher proposed the use of unconventional artistic efforts to propel feminism forward and sought through different actors in mediation being remediated through the chatbot corpus to disrupt existing understandings of feminist culture in order in order to encourage new and past hushed feminist conversations in Singapore and beyond. In actuality, this was not to be because these academic endeavors were not supported.This was not to be because these academic endeavors were not supported. The practical part of the Internet Folklore project – namely the WIFI device that the project operates through - was confiscated by the National University of Singapore security during the workshop (see Figure 7).

The impact of governmental policies and regulations on the actual digital humanities scholarship that is being advocated is distantly in opposition. In an era of increasing activities emergent in artificial intelligence (AI), industry developments and other nonhuman technological agents, the work is a metaphor for the capacity of our technologies to both read and write new realities.

Performing the Internet in 'My Malaysian Uncles are Reddit Conspiracy Lurkers' Teik-Kim Pok through still image projection gave a live recital of news, memes and conspiracy discussions, and a patchwork of personal anecdotes lifted from the WhatsApp archives from his Malaysian relatives. Reflecting on how 'lore' has been generated on a human level in his extended Southeast Asian family grapevine.

Figure 7. Location of Internet Signal Extender devise Aerials Cypher Installation detail – Day 2 Internet Life and Lore in Asia Workshop (©2013, Nancy Mauro-Flude. Used with permission.)

Memories and pictures unwittingly becoming memes proliferated across the Internet from the digital palm of their hands, migrating easily through boundaries of personal, political, speculative conspiracy. As the final presentation, throwing the role of lore into high relief, Pok then enacted a script, an algorithm of instructions not to a machine but instead to the audience:

close our eyes
breathe
return to the moment
hold up our index finger to our mouth
give it a gentle kiss
and
blow it into the abyss of the internet...

NEW DITAL MAGOI

Reaching beyond archival telos, addressing the limitations of software illiteracy in digital humanities is paramount as we enter an era increasingly defined by digital automation of infrastructure. One may find himself/herself asking what future is there but the humanities? (Latour, 2015). Raising structural or philosophical issues of digital scholarship, bringing the audience more awareness of the impact of the political and geographical control/policies on the Internet Folklore and the importance of digital literacy among scholars in the new form of humanities and arts (programming and computing competencies). Barbara Maria Stafford (2008) recognizes those who know how to go above and below the interface (or code) as "digital magoi" who might mediate or bridge the fracture between computer science and the arts and humanities. Thus, invoking transgressive possibilities where one potentially learns how to experience and understand different socially mediated patterns of energy and movement, being in time, emotions and desire. Stafford (2008) considers the conundrum between the "black box duping apparatus and specious expertise" as an historical one,

This coexistence of competing, technically inflected visual environments and rituals… in the double sense of duping apparatus and specious expertise - is still with us today. Perhaps it is nowhere more evident than with the new digital magoi who alone can go below or above the interface to achieve the experience of "real presence" with the codes, i.e., be in direct contact with code (2008, p.148).

At the same time, Stafford (2008) locates the "new digital magoi" and offers that their practices may further mediate these distinct, but co-constituting oppositions. As the implied rules and protocols of the disciplines are often polarities apart, collaboration needs significant interpersonal negotiation and is often fraught. For pragmatists, it seems in theory quite easy to propose and solve by interdisciplinary collaboration, but in practice this is rare (Mauro-Flude 2010). Post digital culture exists and acts as assemblages that transform and morph, Graham, et.al. (in press) give over to "shape-shifting" and "the distinct rationalities on which the Internet in Asia draws by identifying the overlaps between folklore and modern science." In some cases the "technical aspects of the computational media work may seem quite cargo cult, charming and maladroit to sophisticated programmers, but highly sophisticated to those with no programming knowledge" (Mauro-Flude, 2017). Transdisciplinary research and its wavering epistemological ground is often misconstrued as shambolic and awkward as it contaminates discrete knowledge production. The post digital archive and its feminist mandate, is a challenging exemplar, especially evidential to scholars who are software illiterate but consider themselves a confidant of contemporary digital culture. The reality of knowledge-makers in digital humanities being largely unaware of the true meaning of 'digital' (Cramer 2013) is a potent challenge, especially as the earth's first digital régime rears its head in the form of the China's sesame social credit system. Essentialist outsourcing of labor to a "digital magoi" will not solve this problem. This information gap has far-reaching consequences and significant effects on corporate decision-making, consumer behaviors, public debate, and national policy. While "algorithms derive the credit scores are trade secrets, prohibiting forms of testing that can determine how they work" (Ahmed, 2017).

Alibaba has experienced data leaks from company employees as well as external hacks. It is imperative to question what precautions they are taking given that the rapid buildup of a social credit system will likely make the companies that are its stewards targets for data theft and extortion. Moreover, as a host of data-collecting Internet of Things (IoT) devices are sold across China, granular capabilities to track citizens' every move and draw from this information as a social credit input will only grow stronger, and requires work on the part of IoT manufacturers to address these issues. (Ahmed, 2017).

Engineers and computer scientists are coding these scripts and algorithms, informed by the discourse and languages of information technology. These programmers are rarely connected to the arts and humanities. In most cases literary, poetic or aesthetic concerns are seen as anathema. Computer-mediated communication and computer agents (script automation) are key social actors and communicative partners in the

social domain. We must seriously consider the topologies of networks, global flows, retention of data, and what little control and understanding the typical end-user has of the process of data exchange. Encoding, transmission, and comprehension of information are the central topics of information flow in natural languages, as well as many other means of ephemeral communication. To the uninitiated, the implied rules and protocols that define the computational codes may often seem exotic or esoteric (Mauro-Flude, 2017). Pre-defined words or gestures can make a statement, confirm allegiances, or promote questions in a subtle but direct manner. This is a description of code in a social sense. As Florian Cramer maintains "program code contaminates in itself two concepts that are traditionally juxtaposed and unresolved in modern linguistics; the structure, as conceived of in formalism, and structuralism, and the performative, as developed by speech act theory" (2013, p. 94). On the other hand, it may be more than incongruous that both the polemics and the behavior - of which media and cultural theory scholars are critical - come from the same misconceptions. As evidenced in the transmutations of the Kuntilanak apparition, the meaning of natural language communication emerges from its context, rather than its form. Does this dichotomy come as a consequence of the fundamental misunderstanding of the correlation between formal and natural language? What happens when the embodied written word becomes type, the type becomes symbols for a calculating machine, and the written text becomes a performance, a medium, something more than just words on a screen or paper? Does it set something unfathomable into motion? It is precisely these unresolved gaps (and non-prescriptive but performative slippages by theorists, artists and technologists) that performing the Internet unravels. This study is deliberately focused on an intermingling of different agendas and discourses through which key thread is the act of locating or exploiting a loophole in the coded system, that of the institution and that of the Internet as it presently exists. As an operative principle, the code's significance thus extends far deeper than its current digital manifestation. Frederich Kittler, a media theorist who combined technical and cultural understandings of code brought about a profound conceptual transformation of a general understanding of it.

Codes by name and by matter are what determine us today, and what we must articulate if only to avoid disappearing under them completely. They are the language of our time precisely because the word and the matter code are much older…they are a part of every transmission medium (Kittler, 2008, p. 40).

But what happens when researchers experimenting with custom tools in the digital medium have no choice but to conform to the existing laws and regulations applicable within the national jurisdiction of each of its cultural partners? As one would expect this works against the single, global, monolingual Internet that acts as a

homogenizing technology, constantly, eradicating difference. Effective digital literacy practices depend more on bottom-up processes than on top-down policy initiatives. These issues play a major role in the progression of the humanities in the Singaporean context and beyond (Svenson 2016). The environmental, sociocultural implications for the Internet and online communities in Asia are complex. Infrastructure is intimately tied to the data centers which host the platforms of networked activity. "Singapore hosts over fifty percent of the servers in South East Asia" (Neilson, 2018). Participation, power, agency, and social issues aside, the total amount of digital data several years ago surpassed the total amount of printed data, and it has been accumulating since then at an exponential rate. This confronts society with a new problem – the long-term storage not to mention and archiving of important digital materials, the mutual digital and ecological footprints.

Server stacks assembled in sealed off cryogenic cooling chambers. Data centers are currently locked down realms, menacing high security authoritarian compounds. "Data centers tend to cluster in particular territorial environments, often based on the presence of infrastructural conduits that date back to previous episodes of imperial expansion…partly due to the presence of cable connections that were established by the British in the late nineteenth century" (Neilson 2018). These reticent facts are mirrored by the use limitations prescribed by governmental content requirements engaging with the public sphere. According to the Media Development Authority (2018) in 2014 new regulatory framework stating, online content providers must apply for a license (renewed on a yearly basis) if they:

report an average of at least one article per week on Singapore news and current affairs over a period of two months, and are visited by at least 50,000 unique IP addresses from Singapore each month over the same period of two months (Media Development Authority 2018)

These sites must also put up a performance bond of $50,000 SGD (Media Development Authority 2018). While some people make the case for how "Singapore has one of the freest internets in Southeast Asia and is liberal compared to China, with a score of 87/100 (Freedom House 2017a)." (cited in Graham et al. 2018). It is argued that this fact cannot be perceived in isolation to the experience of living on the ground. Especially now the 2014-2020 rollout of the social credit system progresses in China, it is evidenced that Singapore is already participating (Ahmed, 2017). Adding to the complexity of the vernacular and the institutional, and between local and global Observing the challenge put by considering the omnipotence the black boxed data center's Singapore and then reflecting on the *Smart Nation* initiative by the Singapore's government. An *open data* sharing site was created where anyone can access datasets of Singapore, launched in 2011, Data.gov.sg creates a free and

open data portal that aims to create a more relevant and understandable government data for the public (Govtech Singapore, 2017). The data sets presented in this website are limited and can hardly be utilized in a particularly useful way by normal citizens. The heterogeneity of this open data hinders meaningful analysis and search, which leads to a limitation on the transparency level (Heise & Naumann, 2012). Unlike for instance, Wikipedia's open history, the so-called *open data* sharing site only provides limited datasets that are summarized into a graphs instead of providing raw data that the name intends.

Considering the democratization of knowledge together with infrastructure is a concept that has been gaining traction (Karasti, Karasti, Pipek & Bowker 2018). For those on the ground in Singapore who want to break out of the black box and customize artisanal code, mod their computer away from inbuilt consumer control paradigms, present radical experimental art, or even just post digital cultural projects that deploys the Internet (not even remotely critically), these activities are often fraught. When it comes to potential deployments of the postcolonial archive in post digital culture, its legal frameworks remain local. Scholars have to conform to the existing laws and regulations applicable within the national jurisdiction of each of its cultural partners.

Now the postcolonial archive has been expanded to the feminist Internet, it is corrupting the servers, and data centers in which they physically rest. The feminist server is engaged, and autonomous, and grants agency to the community it was created for. A conflict between experimentation in the former and a need for reliability then arises, but it is in this tension between thinking and doing, between reflecting and acting that brings together such a concept. The consciousness raising inherent in these questions is the beginning of their answering: The Internet has to claim a new autonomy, notwithstanding access and even autonomous management of the server where the data is stored. When attempting to deploy projects that implement the Internet in a critical way, problematic issues invariably arise for transdisciplinary research and knowledge production. These are some of the many hurdles that need vital attention. To address the issues raised by Murov & Mukuka (2007) a feminist server is proposed, it is 'feminist' because first, it acknowledges sovereignty issues around technological power relations. Secondly, its intention is to provide services for its community by counter current system administration habitus. The Feminist Server Stack takes the role of supporting actant, foregrounds the deeply intertwined relationship between artwork and feminist server technology that reflects upon the ephemeral conditions of a network and our embodied position within it (Mauro-Flude, 2015). Reciprocal trust is needed to maintain the server and remain engaged and motivated to contribute to the maintenance.

SOFTWARE LITERACY SEWING CIRCLES

On broad terms, this undertaking has addressed the need for an expanded practice of digital humanities reaching beyond the significant problem of how to preserve intangible cultural heritage. The modes of performance computation media enabled, through which human beings participate and interact, make necessary the implementation of frameworks for bottom up digital culture that shapes *in situ* digital literacy. This is an approach to knowledge that encourages the user to be a content producer instead of content consumer. A reflexive ethos is advocated that encourages the continual questioning of established responses and behaviors to creative production and reception by fostering a radical subjectivity through such an experiential approach. It is recommended to circumvent traditional top-down methods of assigning value and digital knowledge production and "skill acquisition that advocates home-brewed methods for collective gain (think of self-organized digital literacy circles)" (Mauro-Flude, 2017). An interdisciplinary approach to computer literacy allows for greater insights into digital infrastructure in order to lead to radical innovations that are more cutting-edge and potentially meaningful to all that participate in Performing the Internet. By encouraging software literacy through modes of experimental pedagogy an alternative body of empirical knowledge can be obtained and "the more incentives for figuring out how to hack it will proliferate" (Ahmed, 2016), that is to rewrite Internet sovereignty out of its current totalitarian emergence. The cashless society that the Smart Nation in Singapore carries with it in its wake should "move away from identity politics and moral policing, and formulate much radical programs such as education, fair trade, and ultimately a global redistribution of wealth (which goes way further than the demand for compensation)" (Lovink, 2018). Hence, the obstacles one encounters when attempting such a project, for instance, simply user testing the Internet infrastructure as an art medium, in Singapore with the cooperation of all stakeholders and from the three tiers of government, hinder the ability for researchers to be able to fully understand the apparatuses. Further, to experientially learn is to be able to identify strength and weaknesses and understand how to technically posit possible revisions away from the current techno deterministic destiny, "the spread of a social credit system and its associated sensors, QR codes, and other trace-reading tools can create new security concerns separate from those it allegedly aims to reduce through near-ubiquitous monitoring of behavior" (Ahmed 2016). This not only deeply informs the malefic conditions, but also envisions a more hopeful future trajectory of an alternative, conceivably more autonomous version of the Internet. Holistic development of a user-centered, participatory approach to the design of interactive systems which can actually be facilitated by access to such infrastructures. Such features mean that the postcolonial archive has the potential to greatly advance our thinking about

how we experience a repository of knowledge. In its place people must contend that digital infrastructures supporting today's ubiquitous computing are inherently messy, heterogeneous, and locally shaped by power relations. Overhauling the current role of the data center and highlighting the need to look differently at how such research could be shared, assessed, and stored or archived. This underlines our ability to re-think the mechanism - to be able to partially control and rewrite (or at least understand) technology that runs the Internet ourselves.

CONCLUSION

The analytical terms, Performing the Internet and Post Internet Folklore were posited as a locus for understanding how computational technologies do not only reveal new insights about post digital culture but also transform propensities for embodied contemplation, a subject at the heart of humanities scholarship. Examining the reach of ubiquitous computing into our daily lives, and the impact of networked computation has upon the planet, it was argued how the ubiquity of computational media has influenced our desires and fears, concerns and prejudices. By introducing experimental methods such as the feminist server stack to imagine new possibilities for digital humanities, a case study was presented as a model for promoting a discussion of software pedagogy and post digital practices situated within the region of Asia Pacific. In examining how the themes of large-scale data aggregation are problematized, in and by artists through performing arts and twenty-first century art forms of the post digital, revealing a need for a multiplicity of internet cultures and of diverse Internets and communities. Beyond the elite language of computer subculture *1337 / leet sp33k*, the endless torrent of memes, *Performing the Internet* opens up pathways to re-think these mechanisms. Advocating for feminist server, the significance of subtlety, nuance, conflicting ideas, and paradox as additional frameworks and resources for rethinking a broad range of projects across critical analyses, post digital performance, and network cultures allowed us to reconsider what if the Internet was a place of autonomy, and not a place of mercantile, malevolent ubiquitous surveillance. Findings foregrounded that further articulation of perceptible conflicts in knowledge production – the control codes hardwired to cultural politics - is necessary for genuine progress. Censorship is one of the greatest challenges facing the Internet today, for the formation of civil societies, or the multiplicity of internet that is being held up for consideration. The feminist server challenges official mode of knowledge production and dissemination over the Internet sanctioned by the state and commercial interests. It was evidenced how and why digital humanities (in Singapore and beyond) need crucial didactic reforms in terms of software literacy; along with validating the role of Internet folklore in South East

Asia that presently occurs mainly under the radar of official culture. Through the Pontianak a technological, political and cultural tool, the postcolonial archive was reimagined, to be post digital and hosted on a feminist server. To behold and even consider the distant possibility of a feminist run data center and thus the internet, to offer new insights into the relationships between meaning, politics, and desire. No longer seeing the names of disciplines divided one from another as categories instead projects are intertextual and fundamentally interdisciplinary belonging to several categories at the same time. By encouraging alternative ways of performing with and experiencing the Internet, beyond consumer-driven entrepreneurial affordances, and archival teleology, there is no doubt that these efforts would accentuate our ability to re-think the mechanism - to be able to partially control and rewrite (or at least understand) technology that run the Internet, as a bespoke apparatus, as we live our lives and make meaning through and with it.

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KEY TERMS AND DEFINITIONS

Apparatus: An assemblage of modular equipment needed to work together to function. Although not perceived to be synonymous, the word can imply an understanding of the complexity of the organs of a structure or system, such as the body, or machine.

Black Box: An apparatus, device, system, or object which can be viewed or obscured in terms of its function in regard to input, output, and transfer characteristics.

Code: A code is a set of rules that allow an initiated user to convert one type of information to another. There are many conflations in how the word *code* is used even though the contexts may be completely different; equivalence is frequently made between heuristics, algorithms, programming, and language. There are various technical terms for code instances that relate to their functionality in a utilitarian sense, for instance, source codes, dictionaries, and grammar. Every computer language has a defined grammar, which is interpreted by a compiler. The compiler digests semantic content and produces byte code, which the computer can execute. Sometimes an artwork carries with it a set of semiotics so obscure and hermetic that unless you actually understand the code involved, the meaning may be hidden from you. All societies are replete with social transactions and codes of conduct; such codes must be learned by the individual wishing to function fully within that society. Often in social or political settings, the elusiveness of "the code" is the intention.

Live Coding: A contemporary computer-based artform that manifests as performances that include "on the fly" programming. Live coding focuses on algorithmic execution while exploring the meaning of interactivity and the relationship between the performer and emerging technologies. It questions the nature of real-time performance and the contexts that surround it.

Maker Culture: The growth of the maker movement and do it yourself (DIY) enthusiasm has developed exponentially since the first Maker Faire (2005) in San Francisco. Maker culture reflects a popular cultural surge in hack space and hacker orientated activities, extending its reach into the fields of design and fashion.

Modding: Domestic items or computational parts are reimagined as elements of visual richness that convey a symbolism. Hardware elements are aestheticized.

Server: A computer program that provides services to users and other computer programs in the form of local or remote computers. A computer via which a program runs is also referred to as a server. A server is also a program that processes requests from client programs. A web server is a computer program that serves HTML requests from a web client – for instance, a web browser (Firefox, Chrome) is a client that requests HTML files from web servers.

ENDNOTE

[1]   Examples of archival best practice in traditional Digital Humanities Archives in South East Asia: CWA: Contemporary Wayang Archive. Full length videos of new adaptations of Javanese wayang kulit (wayang kontemporer), with subtitles and notes. Retrieved June 8, 2018, from http://cwa-web.org. The Asian Intercultural Digital Archives (AIDA) is a group of digital archives of East and Southeast Asian performance materials based at the National University of Singapore. AIDA focuses on the interculturality both of performance practices in the region, and of archiving practices through which performances may be enjoyed and studied by viewers within and beyond the region on the internet. Retrieved June 8, 2018, from http://aida-web.org/. The Asian Shakespeare Intercultural Archive is a collaborative, multilingual online archive of performance materials. Its aim is to provide resources for education and research in intercultural and Shakespeare performance. Retrieved June 8, 2018, from http://a-s-i-a-web.org.