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What is the relationship between contemporary digital media and contemporary society? Is it possible to affirm that digital media are without sin and exist purely in a complex socio-political and economic context within which the users bring with them their ethical and cultural complexities? This issue, through a range of scholarly writings, analyzes the problems of ethics and sin within contemporary digital media frameworks.

WITHOUT SIN
FREEDOM AND TABOO IN DIGITAL MEDIA

Without Sin: Freedom and Taboo in Digital Media

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Post-Society:
Data Capture and Erasure
One Click at a Time

"Oh, in the name of God! Now I know what it feels like to be God!"

Frankenstein (1931)

They must have felt like gods at the NSA when they discovered that they were able to spy on anyone. What feels ridiculous to someone that works with digital media is the level of ignorance that people continue to have about how much everyone else knows or can know about 'you.' If only people were willing to pay someone, or to spend a bit of time searching through digital data services themselves,they would discover a range of services that have started to commercialize collective data: bought and sold through a range of semi-public businesses and almost privatized governmental agencies. Public records of infractions and crimes are available for 'you' to know what 'your' neighbor has been up to.These deals, if not outright illegal, are characterized by unsolved ethical issues since they are a 'selling' of state documents that were never supposed to be so easily accessible to a global audience.

Concurrently as I write this introduction, I read that the maddened Angela Merkel is profoundly shocked that her mobile phone has been tapped into – this is naive at best but also deeply concerning: since to not understand what has happened politically and technologically in the 21st century one must have been living on the moon.Perhaps it is an act or a pantomimestagedfor the benefit of those 'common' people that need to continue living with the strong

belief or faith that their lives are in good hands, that of the state.

Nevertheless it speaks of a 'madness' of the politician as a category. A madness characterized by an alienation from the rest of society that takes the form of isolation. This isolation is, in Foucauldian terms, none other than the enforcement of a voluntary seclusion in the prison and the mad house.

The prisons within which the military, corporate, financial and political worlds have shut themselves in speak increasingly of paranoia and fear. As such the voluntary prison within which they have sought refuge speaks more and more the confused language that one may have imagined to hear from the *Stultifera Navis*.

Paranoia, narcissism and omnipotence, all belong to the delirium of the sociopaths, [1] who push towards the horizon, following the trajectory set by the 'deranged minds.'

It is for the other world that the madman sets sail in his fools' boat; it is from the other world that he comes when he disembarks. [2]

This otherworldliness – this being an alien from another world – has increasingly become the characteristic of contemporary political discourse, which, detached from the reality of the 'majority' of people, feeds into the godlike complex. Foolishness and lunacy reinforce this perspective, creating a rationale that drives the

Stultifera Navis towards its destiny inexorably, bringing all others with them.

Having segregated themselves in a prison of their own doing, the politicians look at all others as being part of a large mad house. It is from the upper deck of a gilded prison that politicians stir the masses in the lower decks into a frenzy of fear and obedience.

Why should it be in this discourse, whose forms we have seen to be so faithful to the rules of reason, that we find all those signs which will most manifestly declare the very absence of reason? [3]

Discourses, and in particular political discourses, no longer mask the reality of madness and with it the feeling of having become omnipotent talks of human madness in its attempt to acquire the impossible: that of being not just godlike, but God.

As omnipotent and omniscient gods the NSA should allow the state to 'see.'The reality is that the 'hands' of the state are no longer functional and have been substituted with prostheses wirelessly controlled by the sociopaths of globalized corporations. Theamputation of the hands happenedwhile the state itself was merrily looking somewhere else, tooblissfullybusy counting the money that was flowing through neo-capitalistic financial dreams of renewed prosperity and Napoleonic grandeur.

The madness is also in the discourse about data, deprived of ethical concerns and rootedwithinperceptions of both post-democracy and post-state.So much so that we could speak of a post-data society, within which the current post-societal existence is the consequence of profound changes and alterations to an ideal way of living that technology – as its greatest sin – still presents as participatory and horizontal but not as plutocratic and hierarchical.

In order to discuss the present post-societal condition, one would need first to analyze the cultural disregard that people have, or perhaps have acquired, for their personal data and the increasing lack of participation in the alteration of the frameworks set for post-data.

This disregard for personal data is part of cultural forms of concession and contracting that are determined and shaped not by rights but through the mass loss of a few rights in exchange for a) participation in a product as early adopters (Google), b) for design status and appearance (Apple), c) social conventions and entertainment (Facebook) and (Twitter).

Big data offers an insight into the problem of big losses if a catastrophe, accidental or intentional, should ever strike big databases. The right of ownership of the 'real object' that existed in the data-cloudwill become the new arena of post-data conflict. In this context of loss, if the crisis of the big banks has demonstrated anything, citizens will bear the brunt of the losses that will be spread iniquitously through 'everyone else.'

The problem is therefore characterized by multiple levels of complexity that can overall be referred to as a general problem of ethics.Of data, interpreted asthe ethical collection and usage of massive amounts of data. Also the ethical issues of post-data and their technologies has to be linked to a psychological understanding of the role that individuals play within society, both singularly and collectively through the use of media that engender new behavioral social systems through the access and usage of big data as sources of information.

Both Prof. Johnny Golding and Prof. Richard Gere present in this collection of essays two perspectives that, by looking at taboos and the sinful nature of technology, demand from the reader a reflection on

the role that ethics plays or no longer plays within contemporary mediated societies.

Concepts of technological neutrality as well as economic neutrality have become enforced taboos when the experiential understanding is that tools that possess a degree of danger should be handled with a modicum of self-control and restraint.

The merging of economic and technological neutrality has generated corporate giants that have acquired a global stronghold on people's digital data. In the construction of arguments in favor or against a modicum of control for these economic and technological giants,the state and its political representatives have thus far considered it convenient not to side with the libertarian argument, since the control was being exercised on the citizen; a category to which politicians and corporate tycoons and other plutocrats and higher managers believe they do not belong to or want to be reduced to.

The problem is then not so much that the German citizens, or the rest of the world, were spied on. The taboo that has been infringed is that Angela Merkel, a head of state, was spied on. This implies an unwillingly democratic reduction from the NSA of all heads of state to 'normal citizens.' The disruption and the violated taboo is that all people are data in a horizontal structure that does not admit hierarchical distinctions and discriminations. In this sense perhaps digital data are violating the last taboo: anyone can be spied upon, creating a truly democratic society of surveillance.

The construction of digital data is such that there is not a normal, a superior, a better or a worse, but everything and everyone is reduced to data. That includes Angela Merkel and any other head of state. Suddenly the process of spying represents a welcome reduction to a basic common denominator: there is no

difference between a German head of state or a blue collar worker; the NSA can spy on both and digital data are collected on both.

If anything was achieved by the NSA it was an egalitarian treatment of all of those who can be spied upon: a horizontal democratic system of spying that does not fear class, political status or money. This is perhaps the best enactment of American egalitarianism: we spy upon all equally and fully with no discrimination based on race, religion, social status, political affiliation or sexual orientation.

But the term spying does not quite manifest the profound level of Panopticon within which we happen to have chosen to live, by giving up and squandering inherited democratic liberties one right at a time, through one agreement at a time, with one click at a time.

These are some of the contemporary issues that this new LEA volume addresses, presenting a series of writings and perspectives from a variety of scholarly fields.

This LEA volume is the result of a collaboration with Dr. Donna Leishman and presents a varied number of perspectives on the infringement of taboos within contemporary digital media.

This issue features a new logo on its cover, that of New York University, Steinhardt School of Culture, Education, and Human Development.

My thanks to Prof. Robert Rowe, Professor of Music and Music Education; Associate Dean of Research and Doctoral Studies at NYU, for his work in establishing this collaboration with LEA.

My gratitude to Dr. Donna Leishman whose time and effort has made this LEA volume possible.
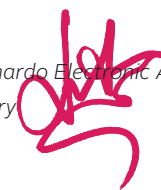
I also have to thank the authors for their patience in complying with the LEA guidelines.

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Özden Şahin has, as always, continued to provide valuable editorial support.

Lanfranco Aceti
Editor in Chief, Leonardo Electronic Almanac
Director, Kasa Gallery

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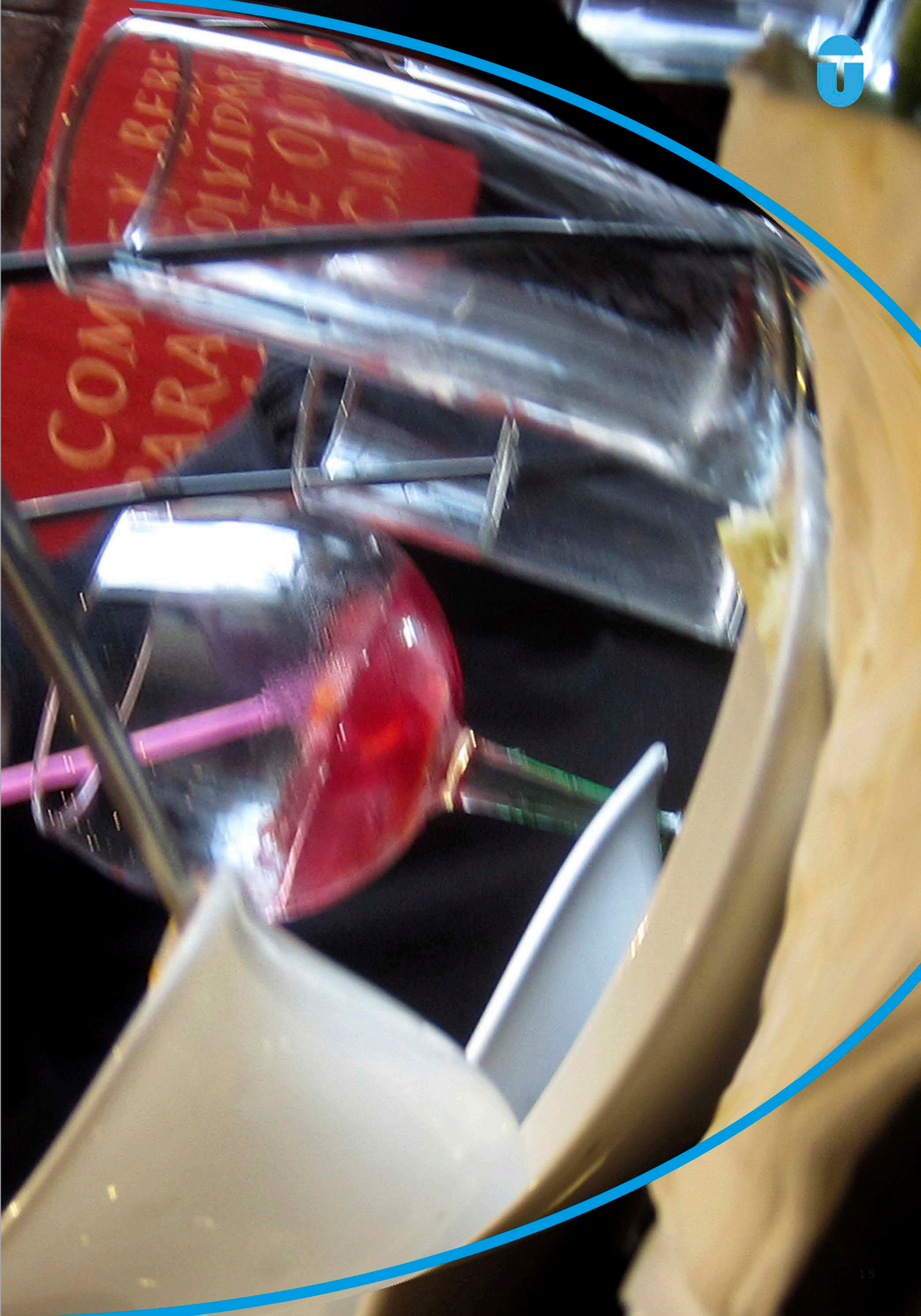
Without Sin: Freedom and Taboo in Digital Media

INTRODUCTION

"Without Sin: Freedom and Taboo in Digital Media" is both the title of this special edition and the title of a panel that was held at ISEA 2011. The goal of the panel was to explore the disinhibited mind's ability to exercise freedom, act on desires and explore the taboo whilst also surveying the boarder question of the moral economy of human activity and how this is translates (or not) within digital media. The original panelists (some of whom have contributed to the this edition) helped to further delineate additional issues surrounding identity, ethics, human socialization and the need to better capture/understand/perceive how we are being affected by our technologies (for good or bad).

In the call for participation, I offered the view that contemporary social technologies are continuously changing our practical reality, a reality where human experience and technical artifacts have become beyond intertwined, but for many interwoven, inseparable – if this were to be true then type of cognizance (legal and personal) do we need to develop? Implied in this call is the need for both a better awareness and jurisdiction of these emergent issues. Whilst this edition is not (and could not be) a unified survey of human activity and digital media; the final edition contains 17 multidisciplinary papers spanning Law, Curation, Pedagogy, Choreography, Art History, Political Science, Creative Practice and Critical Theory – the volume attempts to illustrate the complexity of the situation and if possible the kinship between pertinent disciplines.

Human relationships are rich and they're messy and they're demanding. And we clean them up with technology. Texting, email, posting, all of these things let us present the self, as we want to be. We get to edit, and that means we get to delete, and that means we get to retouch, the face, the voice, the flesh, the body – not too little, not too much, just right. [1]

Sherry Turkle's current hypothesis is that technology has introduced mechanisms that bypass traditional concepts of both community and identity indeed that we are facing (and some of us are struggling with) an array of reconceptualizations. Zygmunt Bauman in his essay "From Pilgrim to Tourist – or a Short History of Identity" suggests that:

One thinks of identity whenever one is not sure if where one belongs; that is, one is not sure how to place oneself among the evident variety if behavioral styles and patterns, and how to make sure that people would accept this placement as right and proper, so that both sides would know how to go on in each other's presence. 'Identity' is the name given to the escape sought from that uncertainty. [2]

Our 'post-social' context where increased communication, travel and migration bought about by technological advances has only multiplied Bauman's conditions of uncertainty. Whilst there may be aesthetic tropes within social media, there is no universally accepted authority within contemporary culture nor is there an easy mutual acceptance of what is 'right and proper' after all we could be engaging in different iterations of "backward presence" or "forward presence" [3] whilst interacting with human and non-human alike (see Simone O'Callaghan's contribution: "Seductive Technologies and Inadvertent Voyeurs" for a further exploration of presence and intimacy).

Editing such a broad set of responses required an editorial approach that both allowed full expansion of each paper's discourse whilst looking for interconnections (and oppositions) in attempt to distil some commonalties. This was achieved by mentally placing citation, speculation and proposition between one another. Spilling the 'meaning' of the individual contributions into proximate conceptual spaces inhabited by other papers and looking for issues that overlapped or resonated allowed me formulate a sense of what might become future pertinent themes, and what now follows below are the notes from this process.

What Social Contract?

Hereby it is manifest that during the time men live without a common power to keep them all in awe, they are in that condition which is called war; and such a war as is of every man against every man. (Thomas Hobbes in chapter XIII of the *Leviathan* [4])

Deborah Swack's "FEELTRACE and the Emotions (after Charles Darwin)," Johnny Golding's "Ana-Materialism & The Pineal Eye: Becoming Mouth-Breast" and Kriss Ravetto's "Anonymous Social As Political" argue that our perception of political authority is somewhere between shaky towards becoming erased altogether. Whilst the original 17th century rational for sublimating to a political authority – i.e. we'd default back to a war like state in the absence of a binding social contract – seems like a overwrought fear, the capacity for repugnant anti-social behavior as a consequence of no longer being in awe of any common power is real and increasingly impactful. [5] Problematically the notion of a government that has been created by individuals to protect themselves from one another sadly seems hopelessly incongruent in today's increasingly skeptical context. Co-joined to the dissipation of perceptible political entities – the power dynamics of being 'good' rather than 'bad' and or 'sinful' appears to be one of most flimsy of our prior social borders. The new reality that allows us to transgress and explore our tastes and predictions from a remote and often depersonalized position feels safer (i.e. with less personal accountability) a scenario that is a further exacerbated space vacated by the historic role of the church as a civic authority. Mikhail Pushkin in his paper "Do we need morality anymore?" explores the online moral value system and how this ties into the deleterious effect of the sensationalism in traditional mass media. He suggests that the absence of restrictive online social structure means the very consciousness of sin and guilt has now changed and potentially so has our capability of experiencing the emotions tied to guilt. [6] Sandra Wilson and Lila Gomez in their paper "The Premediation of Identity Management in Art & Design – New Model Cyborgs – Organic & Digital" concur stating that "the line dividing taboos from desires is often blurred, and a taboo can quickly flip into a desire, if the conditions under which that interaction take place change."

The Free?

The issue of freedom seems to be where much of the debate continues – between what constitutes false liberty and real freedoms. Unique in their own approach Golding's and Pushkin's papers challenge the premise that is implied in this edition's title – that 'Freedom and Taboo' even have a place at all in our contemporary existence as our established codes of morality (and ethics) have been radically reconfigured. This stance made me recall Hobbes's first treaty where he argued that "commodious living" (i.e. morality, politics, society), are purely conventional and that moral terms are not objective states of affairs but are reflections of tastes and preferences – indeed within another of his key concepts (i.e. the "State of Nature") 'anything goes' as nothing is immoral and or unjust. [6] It would 'appear' that we are freer from traditional institutional controls whilst at the same time one could argue that the borders of contiguous social forms (i.e.

procedures, networks, our relationship to objects and things) seem to have dissipated alongside our capacity to perceive them. The problematic lack of an established conventional commodious living such as Bauman's idea that something is 'right and proper' is under challenge by the individualized complexity thrown up from our disinhibited minds, which can result in benign or toxic or 'other' behaviors depending on our personality's variables. [7] Ravetto describes how Anonymous consciously inhabits such an 'other' space:

Anonymous demonstrates how the common cannot take on an ethical or coherent political message. It can only produce a heterogeneity of spontaneous actions, contradictory messages, and embrace its contradictions, its act of vigilante justice as much as its dark, racist, sexist, homophobic and predatory qualities.

Perception

Traditionally good cognition of identity/society/relationships (networks and procedures) was achieved through a mix of social conditioning and astute mindfulness. On the other hand at present the dissipation of contiguous social forms has problematized the whole process creating multiple social situations (new and prior) and rather than a semi-stable situation (to reflect upon) we are faced with a digital deluge of unverifiable information. Perception and memory comes up in David R. Burns's paper "Media, Memory, and Representation in the Digital Age: Rebirth" where he looks at the problematic role of digital mediation in his personal experience of the 9/11. He recalls the discombobulating feeling of being: "part of the digital media being internationally broadcast across the world." Burns seeks to highlight the media's influence over an individual's constructed memories. From a different perspective Charlie Gere reminds us of the prominence (and shortcomings) of our ocular-centric perspective in his discussion of "Alterity, Pornography,

and the Divine" and cites Martin Jay's essay "Scopic Regimes of Modernity" [8] which in turn explores a variety of significant core concepts of modernity where vision and knowledge meet and influence one another. Gere/Jay's line of references resurrect for the reader Michel Foucault's notion of the "Panopticon" (where surveillance is diffused as a principle of social organization), [9] Guy DeDord's *The Society of the Spectacle* i.e. "All that once was directly lived has become mere representation") [10] and Richard Rorty's *Philosophy and the Mirror of Nature* (published in 1979). [11] The latter gave form to an enduringly relevant question: are we overly reliant on a representational theory of perception? And how does this intersect with the risks associated with solipsistic introjection within non face-to-face online interactions? The ethics of 'looking' and data collection is also a feature of Deborah Burns's paper "Differential Surveillance of Students: Surveillance/Sousveillance Art as Opportunities for Reform" in which Burns asks questions of the higher education system and its complicity in the further erosion of student privacy. Burn's interest in accountability bridges us back to Foucault's idea of panoptic diffusion:

He who is subjected to a field of visibility, and who knows it, assumes responsibility for the constraints of power; he makes them play spontaneously upon himself; he inscribes in himself the power relation in which he simultaneously plays both roles; he becomes the principle of his own subjection [12]

In panoptic diffusion the knowingness of the subject is key – as we move towards naturalization of surveillance and data capture through mass digitization such power relationships change. This is a concern mirrored by Eric Schmidt Google's Executive Chairman when considering the reach of our digital footprints: "I don't believe society understands what happens when everything is available, knowable and recorded

by everyone all the time." [13] Smita Kheria's "Copyright and Digital Art practice: The 'Schizophrenic' Position of the Digital Artist" and Alana Kushnir's "When Curating Meets Piracy: Rehashing the History of Unauthorised Exhibition-Making" explore accountability and power relationships in different loci whilst looking at the mitigation of creative appropriation and reuse. It is clear that in this area serious reconfigurations have occurred and that new paradigms of acceptability (often counter to the legal reality) are at play.

Bauman's belief that "One thinks of identity whenever one is not sure if where one belongs" [14] maybe a clue into why social media have become such an integral part of modern society. It is after all an activity that privileges 'looking' and objectifying without the recipient's direct engagement – a new power relationship quite displaced from traditional (identity affirming) social interactions. In this context of social media over dependency it may be timely to reconsider Guy-Ernest Debord's 'thesis 30':

The externality of the spectacle in relation to the active man appears in the fact that his own gestures are no longer his but those of another who represents them to him. This is why the spectator feels at home nowhere, because the spectacle is everywhere. [15]

Underneath these issues of perception / presence / identity / is a change or at least a blurring in our political (and personal) agency. Don Ritter's paper "Content Osmosis and the Political Economy of Social Media" functions as a reminder of the historical precedents and continued subterfuges that occur in mediated feelings of empowerment. Whilst Brigit Bachler in her paper "Like Reality" presents to the reader that "besides reality television formats, social networking sites such as Facebook have successfully delivered a new form of watching each other, in a seemingly safe

setting, on a screen at home" and that "the appeal of the real becomes the promise of access to the reality of manipulation." [16] The notion of better access to the 'untruth' of things also appears in Ravetto's paper "Anonymous: Social as Political" where she argues that "secrecy and openness are in fact aporias." What is unclear is that, as society maintains its voyeuristic bent and the spectacle is being conflated into the banality of social media, are we becoming occluded from meaningful developmental human interactions? If so, we are to re-create a sense of agency in a process challenged (or already transformed) by clever implicit back-end data gathering [17] and an unknown/undeclared use our data's mined 'self.' Then, and only then, dissociative anonymity may become one strategy that allows us to be more independent; to be willed enough to see the world from our own distinctive needs whilst devising our own extensions to the long genealogy of moral concepts.

Somewhere / Someplace

Perpetual evolution and sustained emergence is one of the other interconnecting threads found within the edition. Many of the authors recognize a requirement for fluidity as a reaction to the pace of change. Geographer David Harvey uses the term "space-time compression" to refer to "processes that . . . revolutionize the objective qualities of space and time." [18] Indeed there seems to be consensus in the edition that we are 'in' an accelerated existence and a concomitant dissolution of traditional spatial co-ordinates – Swack cites Joanna Zylinska's 'human being' to a perpetual "human becoming" [19] whilst Golding in her paper reminds us that Hobbes also asserted that "[f]or seeing life is but a motion of Limbs" [20] and that motion, comes from motion and is inextricably linked to the development and right of the individual. But Golding expands this changing of state further and argues where repetition (and loop) exist so does a different experience:

The usual culprits of time and space (or time as distinct from space and vice versa), along with identity, meaning, Existenz, Being, reconfigure via a relational morphogenesis of velocity, mass, and intensity. This is an immanent surface cohesion, the compelling into a 'this' or a 'here' or a 'now,' a space-time terrain, a collapse and rearticulation of the tick-tick-ticking of distance, movement, speed, born through the repetitive but relative enfolding of otherness, symmetry and diversion.

Golding's is a bewildering proposition requiring a frame of mind traditionally fostered by theoretical physicists but one that may aptly summarize the nature of the quandary. The authors contributing to this edition all exist in their own ways in a post-digital environment, anthropologist Lucy Suchman describes this environment as being "the view from nowhere, detached intimacy, and located accountability." [21] Wilson and Gomez further offer a possible coping strategy by exploring the usefulness of Jay Bolter and Richard Grusin's "pre-mediation" as a means to externalize a host of fears and reduce negative emotions in the face of uncertainty. The imperative to create some strategies to make sense of some of these pressing issues is something that I explore in my own contribution in which I offer the new term *Precarious Design* – as a category of contemporary practice that is emerging from the design community. Precarious Design encompasses a set of practices that by expressing current and near future scenarios are well positioned to probe deeper and tease out important underlying societal assumptions to attain understanding or control in our context of sustained cultural and technological change.

Embodiment

In theory our deterritorialized and changed relationship with our materiality provides a new context in which a disinhibited mind could better act on desires and explore the taboo. Ken Hollings's paper "THERE MUST BE SOMETHING WRONG WITH THIS, SALLY... Faults, lapses and imperfections in the sex life of machines" – presents a compelling survey of the early origin of when humans began to objectify and try live through our machines starting with disembodiment of voice as self that arose from the recording of sound via the Edison phonograph in 1876. Golding and Swack mull over the implications of the digital on embodiment and what it means now to be 'human' as we veer away from biological truth and associated moral values towards something else. Sue Hawksley's "Dancing on the Head of a Sin: touch, dance and taboo" reminds us of our sensorial basis in which:

Touch is generally the least shared, or acknowledged, and the most taboo of the senses. Haptic and touch-screen technologies are becoming ubiquitous, but although this makes touch more commonly experienced or shared, it is often reframed through the virtual, while inter-personal touch still tends to remain sexualized, militarized or medicalized (in most Western cultures at least).

Within her paper Hawksley provides an argument (and example) on how the mediation of one taboo – dance – through another – touch – could mitigate the perceived moral dangers and usual frames of social responsibility. Swack raises bioethical questions about the future nature of life for humans and "the embodiment and containment of the self and its symbiotic integration and enhancement with technology and machines." Whilst Wilson and Gomez's go on to discuss *Bioprescence* by Shiho Fukuhara and Georg Tremmel – a project that provocatively "creates Human DNA trees by transcoding the essence of a human being within the DNA of a tree in order to create 'Living Memorials' or 'Transgenic Tombstones'" [22] – as an example of a manifest situation that still yields a (rare) feeling of transgression into the taboo.

CONCLUSION

In the interstices of this edition there are some questions/observations that remain somewhat unanswered and others that are nascent in their formation. They are listed below as a last comment and as a gateway to further considerations.

Does freedom from traditional hierarchy equate to empowerment when structures and social boundaries are also massively variable and dispersed and are pervasive to the point of incomprehension/invalidation? Or is there some salve to be found in Foucault's line that "'Power is everywhere' and 'comes from everywhere' so in this sense is neither an agency nor a structure," [23] thus nothing is actually being 'lost' in our current context? And is it possible that power has always resided within the individual and we only need to readjust to this autonomy?

Conventional political power (and their panoptic strategies) seem to be stalling, as efforts to resist and subvert deep-seated and long-held governmental secrecy over military/intelligence activities have gained increased momentum while their once privileged data joins in the leaky soft membrane that is the ethics of sharing digitally stored information.

Through dissociative strategies like online anonymity comes power re-balance, potentially giving the individual better recourse to contest unjust actions/laws but what happens when we have no meaningful social contract to direct our civility? Its seems pertinent to explore if we may be in need of a new social contract that reconnects or reconfigures the idea of accountability – indeed it was interesting to see the contrast between Suchman's observed 'lack of accountability' and the Anonymous collective agenda of holding (often political or corporate) hypocrites 'accountable' through punitive measures such as Denial-of-Service attacks.

Regarding de-contextualization of the image / identity – there seems to be something worth bracing oneself against in the free-fall of taxonomies, how we see, how we relate, how we perceive, how we understand that even the surface of things has changed and could still be changing. There is no longer a floating signifier but potentially an abandoned sign in a cloud of dissipating (or endlessly shifting) signification. Where once:

The judges of normality are present everywhere. We are in the society of the teacher-judge, the doctor-judge, the educator-judge, the 'social-worker'-judge; it is on them that the universal reign of the normative is based; and each individual, wherever he may find himself, subjects to it his body, his gestures, his behaviour, his aptitudes, his achievements. [24]

There now is no culturally specific normal in the diffuse digital-physical continuum, which makes the materiality and durability of truth very tenuous indeed; a scenario that judges-teaches-social workers are having some difficulty in addressing and responding to in a timely manner, an activity that the theoretically speculative and methodologically informed research as contained within this edition can hopefully help them with.

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. As perhaps Friedrich Nietzsche would argue... He has previously described "orgies of feelings" that are directly linked to our capacity to feel sin and guilt. "To wrench the human soul from its moorings, to immerse it in terrors, ice, flames, and raptures to such an extent that it is liberated from all petty displeasure, gloom, and depression as by a flash of lightning" Friedrich Nietzsche, *The Genealogy of Morals,* trans. Horace Samuel (New York: Russell and Russell, 1964), 139.

6. Hobbes, *Leviathan*, 409.

7. Consequential subsets within a disinhibited mind are dissociative anonymity (you don't know me) and dissociative imagination (its just a game), which can lead to benign actions such as random acts of kindness or being more affectionate or potentially toxic (exploring more violent assertive sides of ones nature) and 'other' behaviors.

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15. "The alienation of the spectator to the profit of the contemplated object (which is the result of his own unconscious activity) is expressed in the following way: the more he contemplates the less he lives; the more he accepts recognizing himself in the dominant images of need, the less he understands his own existence and his own desires. The externality of the spectacle in relation to the active man appears in the fact that his own gestures are no longer his but those of another who represents them to him. This is why the spectator feels at home nowhere, because the spectacle is everywhere." Debord, *The Society of the Spectacle*, Thesis 30.

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17. Mirko Schäfer highlights the role of implicit participation in the success of the Web 2.0. a situation where user activities are implemental unknowingly in interfaces and back-end design.

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23. Michel Foucault, *The History of Sexuality: The Will to Knowledge,* (London, Penguin, 1998), 63.

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Seductive Technologies and Inadvertent Voyeurs Effect

Figure 1. Example of a QR-Code.

by

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A B S T R A C T

This paper is based on practice based research undertaken to examine the use of Quick Response (QR) Codes in print-based artworks. Knowing that scanning a code can unlock hidden aspects of the artwork can make the urge to scan quite seductive and often irresistible. What happens, though, when the code reveals content which may be disturbing, or evokes strong emotional responses?

Contextualized within the areas of interactive art, mobile devices, affective technologies, presence and intimacy, the discussion examines audience perception of a series of artworks that were created for this research. Evaluation methods draw on precedents set by other researchers in Human Computer Interaction and Grounded Theory. The findings indicate that participants showed strong emotional reactions to the works and revealed unexpected confidences, as well as highlighting that there are opportunities for the artist to surreptitiously entice audiences to engage with content that is taboo or issues that may take people out of their comfort zones. These are discussed within a wider awareness of the ethical considerations when manipulating the emotions of audiences through the mediation of presence and intimacy.

INTRODUCTION

In recent years there has been a rise in the ubiquity of QR-codes in everyday life. These 2 dimensional, square barcodes are read by 'scanning' the tag/ code with the camera in a mobile phone to link to online content. With smart phone technology, anyone who has reader software installed on their phone can scan the code and access whatever content lies behind it. Although primarily the domain of advertising, the use of QR-codes is becoming more prevalent in art.

For audiences viewing and interacting with artworks that have been tagged with QR-codes, knowing that scanning a code can unlock hidden aspects of the artwork, can make the urge to scan quite seductive and often irresistible. What happens, though, when the code reveals content which may be disturbing, or evokes strong emotional responses? How does the consumption of art made for delivery via mobile phones affect audience perceptions of the works? Based on research undertaken to examine the use of QR-codes in print-based artworks [1] this paper examines these ideas, through the making and evaluation of a series of etchings and cyanotypes for a two stage iterative study called *Coded Moments* which were embedded with QR-codes leading to audio content delivered via mobile phone.

Affective Technologies, Co-presence and Intimacy

The pervasive 'always on' nature of a mobile phone, allowing people to constantly be networked in any situation and at any time of day or night, can be seen to have made it a much more intimate and transparent device than other technologies. When talking on a telephone, a person's attention does not focus on the device itself, but rather, through the device to the person or activity at the other end. This transparency of the device is also discussed in writings by Michael Smyth at Edinburgh Napier University, where "good interaction appears unmediated. Interacting through a device should provide the feeling of connectedness with the domain." [2] In research conducted at Surrey University's Digital World Research Centre, Amparo Lasen further clarifies the intimacy of mobile telephones by suggesting that they are "affective technologies," those technologies through which we mediate the expression of emotion, and in turn to which we become emotionally attached. [3]

In the case of camera phones, to create digital media with a device that is location aware and then, in real time send it to another who is physically absent is a means of adopting a shared presence in a digital image space that both people can inhabit, increasing intimacy between people who may not be close geographically. In this way the digital spaces contained are mediated by mobile phones becoming an extension

of the self and one's personal space. As Mizuko Ito has observed in her studies of mobile phone users based at the University of Southern California's Annenberg Centre for Communication: "Distant others are always socially co-present, and place – where you locate yourself – has become a hybrid relation between physical and wirelessly co-present context... We see mobile phones as 'somewhere someplace' technologies that are intimately tied to the experience of particular settings and places." [4]

Concepts such as this are the focus of the 'presence' research community, which is one that interests people from a wide range of disciplines such as Human Computer Interaction, computing, sociology, psychology and education, where substantial empirical research has been done predominantly in the areas of Virtual Reality (VR) and Virtual Environments (VE). With this multidisciplinary interest comes a problematic catalogue of issues surrounding ontologies, epistemologies and criteria for what actually constitutes different types of presence. Martijn Schuemie et al. have tried to capture this in a paper where they highlight the differences in definitions and theories that have emerged in relation to VR since 1997, looking for common ground between them. [5] Commonalties are that the majority of theories agree that presence refers to 'being-there' and that experiences in virtual environments can mimic those in the real world, emotionally and psychologically.

In 2005 Luciano Floridi challenged notions of presence, claiming that the contemporary definitions are from a viewpoint that presence is the result of a lack of absence and this results in "epistemic failure." [6] In his writing he refers to the wider definition of telepresence which is one also held by the International Society for Presence Research (ISPR), however the 'tele' prefix is dropped from the term: "Presence (a shortened version of the term 'telepresence') is a psycho-

logical state or subjective perception in which even though part or all of an individual's current experience is generated by and/or filtered through human-made technology, part or all of the individual's perception fails to accurately acknowledge the role of the technology in the experience." [7]

Floridi's criticisms are that the ISPR definition is Cartesian in nature, where interaction is discussed in terms of perceived, rather than actual. By this Cartesian nature, he is referring to a duality between the mind and body, or immaterial and physical, implying one 'perceives,' may not actually 'be.' In this light he claims that that ISPR's definition is "culturally mass-mediatic," [8] relying on people's perceptions which can be influenced by media, therefore, such a definition can be problematic because it excludes historical concepts and those based in cultures not dependent on mass media. Instead he proposes two types of presence, which can be applied in a wider range of situations: "backward presence" and "forward presence." Explained simply; backward presence is the illusion that someone or something not physically present does share the same space as one here and now, while forward presence is the notion that one's presence is projected into a remote space, different to the one they are currently in.

Ironically, despite the ability for the mobile phone to increase intimacy, in her book *Alone Together; Why We Expect More from Technology and Less from Each Other* Professor Sherry Turkle discusses how younger users, those under 25, are less likely to use a mobile phone for the telephone's original purpose of conveying voice. It is almost as if actually speaking to someone is an intimacy too far in a society constantly connected through social media, where one to one direct communication is less likely. There are new levels of intimacy that smart phones can mediate, and to have a telephone conversation is one of the greatest

intimacies. She cites the example of a teenager who may "not now, but sometime soon, 'force himself' to talk on the phone." [9]

Howard Rhiengold's observations in Tokyo in 2002 predicted what would in 6 years time become a more widespread global phenomenon: "The first signs of the next shift began to reveal themselves to me one spring afternoon. That was when I began to notice people on the streets of Tokyo staring at their mobile phones instead of talking to them." [10] Because smart phones have enabled people to text and focus on screen based activities whilst on the move, a subtle change in the way people choose to communicate has occurred. Without realising it, people have started to view the mediation of voice over distance, into daily lives also as an intrusion, even when the voice belongs to someone very dear. Of this, Turkle, relates in her book about how she chose to text a good friend exciting news rather than ringing her up, and how the receiver of the news is equally happy to receive it in this way. "Both Joyce and I gained something that we are not happy about wanting. Licence to feel together when we are alone, comforted by emails, excused from having to attend to people in real time. We did not set out to avoid the voice but end up denying ourselves its pleasures." [11] As mobile phones enable people to move further away from the immediacy of voice, one wonders if perhaps there is a need to remind them of its value.

For these reasons, in the artworks created for *Coded Moments* studies, audio plays a key role and is a reminder of the original use of telephones. A voice on the other end of the telephone in this context becomes an intimate articulation of someone who is physically distant. A person's voice, the pace, tone, patterns and expression are all cues that we pick up on, that bring us closer to that physically absent other. Yet more and more, with the ability to text, send a

Facebook message, tweet and post Instagram photos from a mobile phone there is less need and often less desire, to use the telephone for its original purpose, that of mediating voice and in turn, the intimacies associated with the presence of others physically absent.

Human Computer Interaction and Interactive Art
In order to understand how people may perceive artworks that use QR-codes, the field of Human Computer Interaction (HCI) provides perspectives and insights that may not occur to artists. It provides the interested practitioner with conceptual frameworks and a methodological toolkit to better examine audience reception of their works.

HCI has a history embedded in the fields of industrial engineering, human factors and cognitive psychology as well as computer science. In HCI, the main emphasis is on using tools from these disciplines to create user-friendly experiences. HCI examines how people interact with 'computers,' of all sizes, be they desktop, laptop, mobile or gaming device, and is of importance to fields of design where the end product requires a user to interact with a computer, such as in interaction design, information architecture design, navigational design and interface design. Artists working in areas that involve interactivity can also benefit greatly from HCI research, as can be seen by precedents in research undertaken at University of Technology, Sydney by the Creativity and Cognition Studios (CCS) and in a different research project, by UK-based artist-researcher Michael Hohl.

HCI provides methods for testing the efficacy of a design in terms of usability, but it can also be used to examine other aspects of human to computer interaction if modified and applied in a way that considers the aims of user engagement.

As Ernest Edmonds points out: "In the case of interactive art, however it is the audience's behavioral response to the artwork's activity that matters most. Audience engagement cannot be seen just in terms of how long they look at the work. It needs to be in terms of what they do, how they develop interactions with the piece and such questions as to whether they experience pain or pleasure." [12]

Originally focusing on the mechanics of how a human interacts with a computer, HCI has broadened to encompass the role that social and cultural factors play in the relationships between people and computers. In the past 10 years, HCI research has widened its points of reference, drawing from the fields of phenomenology, ethnomethodology, semiotics and social science [13] in order to address changes that are occurring as technology becomes more embedded in everyday life in Western society.

The Coded Moments Artworks

The artworks made for *Coded Moments* were open works authored to set up open interpretations. The content explores universal life experiences with the assumption that most people could relate to the works. Ever conscious of those who have warned that one should treasure every moment because the 'time goes so quickly' the work is about moments. Not specific moments, which are attached to individual memories and often captured in photography, but rather universal moments, identified by many new parents. Though the content of the works may be reminiscent of Mary Kelly's *Postpartum Document* (1973–76), the sentiment is very different. Whereas Kelly's work was immersed in feminist politics and ideas of fetishization of tokens by the mother, [14] this body work is about reaching out to other people. It is not about challenging gender based politics; rather, it is an experiment in creating artworks which combine physical and ephemeral media in a non-linear way to emulate personal experiences, the essence of which can be quite hard to articulate through one medium alone.

Making works was a means of exploring the implications of using QR-codes for practitioners in terms of production. Exhibiting the works enabled examination of presenting them, whilst in-depth participant studies provided data that informed a better understanding of the reception of such works, which in turn helped the next iteration of the project to become more focused. As well as understanding technical and usability issues, this research is about the audience's 'experiences' of scanning a QR-code in print-based works of art and what that action leads to.

At the Creativity and Cognition Studios (CCS) at the University of Technology, Sydney, extensive research has been done into evaluative methods examining participant behavior in response to interactive art. The team has examined a range of HCI usability testing methods in determining a methodology appropriate for a clearer understanding of audience perceptions of interactive art. Their underlying premise is:

> At the heart of this field of research, is the drive to base claims and actions upon evidence from the real world and, to that end, audio and video data that are gathered aim to provide as accurate a picture of events as can be obtained. [15]

Like this research, those at the CCS use a dedicated gallery called *Beta_Space* to examine how their audiences interact with artworks. One of the methods used at the CCS is that of video-cued recall. In this the participant is filmed interacting with the artwork in the gallery situation. Afterwards, they sit down with the evaluator and watch the video, narrating all that they were thinking at each event replayed to them on the video. This too is recorded, usually on video. The video and audio data is then coded in a way that en-

ables the researchers to scrutinize participant interaction and behaviors within the gallery space.

Video-cued recall was chosen as a basis for investigating the *Coded Moments* exhibitions because the process of documenting through video and audio means that one can go back after the event and re-examine how participants move around the space and respond behaviorally to the artworks. This way one can also pick up on or examine points that may not have occurred at the time of the participant's engagement with the artwork. Other methods such as "talk-aloud"-where participants constantly narrate at the time what they are thinking and doing – have been found to inhibit participants and distract from the task at hand, [16] therefore, were not used.

After filming interactions in the gallery space, the methodology in this research differs to that of the *Beta_space* studies. Since the participant had been filmed overtly, though attempts were made not to be intrusive by using small flip cameras, it was decided not to film during the second stage, which was that of a semi-structured interview rather than straight recall of their actions. Where studies done by the CCS group have filmed people for time spans of 1 – 2 minutes, [17] the engagement level in this study was much longer, lasting up to 15 minutes and it was felt that this was a long enough time to be filmed. After being filmed for such a long time, it was also thought that people may feel less inhibited and be inclined to be more revealing if they went from being filmed to just having the audio of their conversation recorded. The capture of the audio interviews was done using the same video camera that had been used for filming their actions in the gallery. At this point the interviewer told the participant that the camera was going to be used to record just the audio. The camera was then put face down on the table between the interviewer and participant with the lens pointing downwards

onto black cloth. The participant could see the blank screen at all times while the audio recording took place. This technique did relax participants, resulting in the content of many of the interviews being rather candid and may have been one of the contributing factors underpinning one of the key findings, discussed further in the Insights section of this paper.

A semi-structured interview approach was taken because there were particular aspects that the researcher wanted to find out about the participants' experiences, rather than being purely focused on usability aspects of the works, as in the *Beta_Space* studies. Here, questions were posed based on the conversations that emerged as participants discussed their experiences recalled by the video cues. The way in which these interviews were conducted has more in common with the visual sociology method of photo-elicitation. First devised in 1967 the technique of photo-elicitation [18] involves the use of photographs as cues or points around which to facilitate discussion down a particular path that the interviewer is interested in. The aim of this method is to elicit in-depth responses to questions that may conceptually be quite complex, as in this research. In the *Coded Moments* studies we have studied the methods through which participants discussed the artworks could be called "artwork-elicitation," based on Prosser's photo-elicitation. This is not a term in common use, however it is the best one to describe what took place during the video-recall sessions, for it was the 'artworks' themselves which elicited these insights.

In evaluation of the data a Grounded Theory approach – first devised by Barney Glaser and Anselm Strauss in 1967 [19] – was taken when defining a set of terms to 'code' the video and audio interviews. The term 'approach' is used here because Grounded Theory was not used in strictly textbook sense. It was used in a way that maintained flexibility and an identification
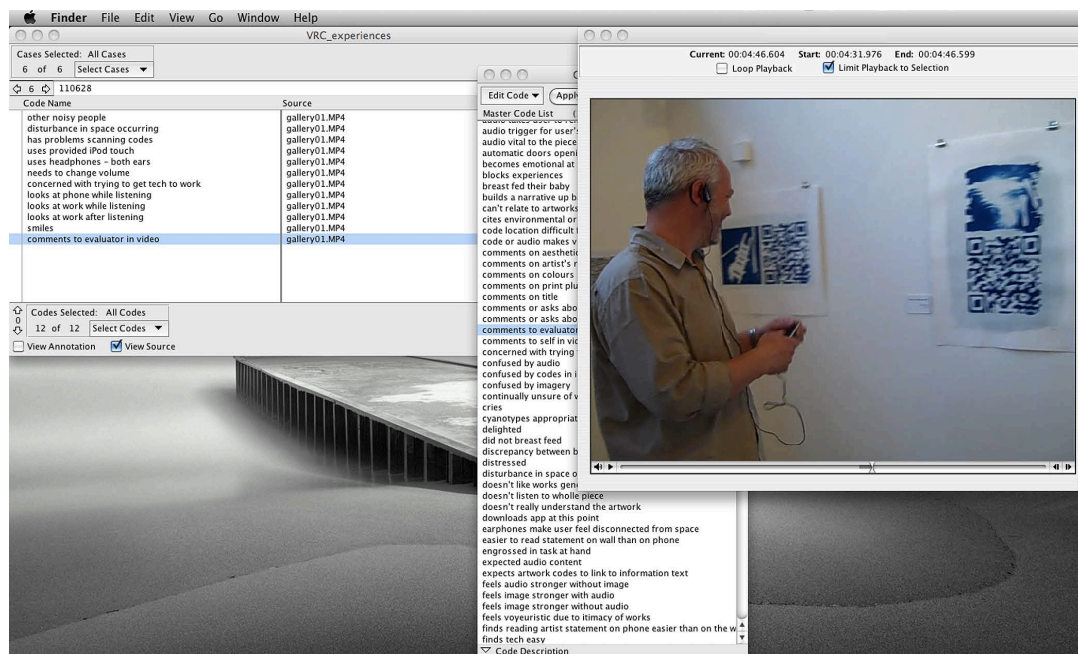
Figure 2. Coding video data in *HyperResearch*. Image courtesy of Simone O'Callaghan. © Simone O'Callaghan, 2011. Used with permission.

of themes and concepts to emerge from the data in a way that is relevant to evaluating and feeding back into the making of artworks. In the data that emerged from this research, there was a need for the bottom-up approach which Grounded Theory affords, rather than the top-down approach of other evaluative methods.

The implementation of Grounded Theory to examine how people perceive interactive artworks has been used to understand participants' experiences of interactive artworks by Michael Hohl of his work *Radiomap.* [20] He, like this research has applied Grounded Theory to interviews, however, unlike this research the interviews were not based on video re-call and artwork-elicitation. Using Grounded Theory to code video-data has been instrumental in drawing out the pertinent aspects of what it means to encounter graphically tagged artworks in exhibition spaces.

The stages of coding in Grounded Theory have been modified since they were first developed by Glaser and Strauss, and the approach that has been used here is that articulated by Charmaz in 2006. [21] Coding took place using original media files. Although an obvious method for dealing with video data, studies

by Scott Klemmer have shown that this is not often the case with of audio interview data. He has revealed that once interviews have been transcribed research-ers rarely revisit the original audio files, often losing important cues in tone of voice, pace of speech and non-verbal cues such as laughter. [22] The use of the software *HyperResearch* enabled the original media files to be preserved whilst applying codes, enabling greater immersion in the data.

INSIGHTS

People's responses to the artworks revealed two key findings about *Coded Moments*:

1. Unexpected Intimacies: a surprising number of participants showed strong emotional reactions to the works and revealed confidences unexpected in a user testing scenario. They also revealed that the artworks themselves seemed to engender intimacy.

2. Seducing the user: because the content that a QR-code leads to is hidden until the moment of scanning, people do not know what to expect when they scan the code and there is the opportu-

nity on behalf of the artist to exploit this. This can then surreptitiously entice audiences to engage with content that is taboo or issues that may take people out of their comfort zones.

Unexpected Intimacies: inadvertent voyeurs – there are a number of reasons that may be responsible for the increase in perceptions of intimacy in the *Coded Moments* works, as well as the propensity for partici-pants to be very candid in these studies. As discussed in the previous section, the methods used to elicit data from participants were designed to put people at ease. The transition from being filmed in the gal-lery space to only having audio recorded during the semi-structured interview stage meant participants generally were more relaxed and felt less under scru-tiny, particularly when they could see that the video recorder was not recording moving image at this point. Having gained confidence in the gallery space with the technology as well as being more used to being filmed, this release from the more challenging part of their activities allowed participants to open up more to the interviewer.

The notion of sharing also came up in participant re-sponses where the physical gallery space in which the works are consumed is a shared one, yet the experi-ences themselves are also an act of sharing. Here the artist shares moments of life with the participant, and most, to a lesser or greater degree, of them are ones that the participant can relate to, making the works both personal and public and the same time. This also could have been a reason for the greater intimacies revealed by participants. From the audience's point of view, the artist had given a personal part of herself to the artworks and therefore to her audience, and they were responding in kind, though often revealing far greater levels of intimacy that the artist had. This gives rise to the notion that the gallery experience becomes personalized and public spaces can become intimate

ones as well, leading, in this research to participants revealing unexpected personal confidences to the researcher.

The way in which the audio was delivered to the participants also has played a key role in the increase in the perception of intimacy. Given that the device being used to interact with the artworks is a mobile phone, there is another layer of implication here. As previously discussed, mobile phones are affective technologies, with which people have a relationship and become emotionally attached. All participants in this study owned a mobile phone, and even if the device that participants use in the gallery context is not actually their own, they are primed to respond to it in a similar way, as a device which is also a mediator of intimacy. As one participant stated: "I'd adopted your iPhone or device, so therefore it was my space." This was the prevailing attitude amongst participants and led to an overall consensus that the experience of viewing the works was considered more personal and intimate. Further investigation also revealed that this was regardless of the content, given that the content in this body of works differed in terms of lev-els of what could be considered intimate. Only one participant did not use these terms or ones related to them and this was someone who used his own iPad. The very nature of holding up a tablet in a gal-lery space to scan the code and then holding it out like a platter whilst listening is a very different physi-cal relationship to that of holding a mobile phone. In contrast, with the participants who used the smaller mobile devices (phones or iPod touches, the iPad mini had not been released when this study was done), some even went so far to say that they felt that it was voyeuristic, and this made them uncom-fortable in their inadvertent roles as voyeurs, even though the artist had invited them into these spaces and moments.

Participant 1: "For this, because its so personal as well, and its so personal to you, it also feels a little bit like you're intruding on your relationship as well, and I think that also as an effect on somebody ... Although we have been invited to do it, I suppose that (being a voyeur) did come into my mind as well and I thought 'Wait a minute' and ... when I saw the title (which had a date on it) I instantly thought 'I couldn't have had anyone record me at that time'."

Participant 2: "having the audio attached to the pieces, it took you into this kind of personal intimate experience, and actually took you outside the gallery experience into that personal, intimate domestic space, revisited."

The use of mobile phones in artworks such as these, as well as being affective technologies are devices through which presence is mediated. This mediation of presence also opens up perceptions of intimacy that many not have occurred to participants had the delivery of digital content not been via a mobile telephone, where the presence of voice over a telephone is a form that lends itself to a very personalized feeling of the presence of others:

Participant 3: "It just made me think of, sort of, times when my husband was coming home from work, and that we were just in the kitchen, and.. yeah... just a bit of like, chat from him and him being with me and just watching him with my daughter and ... I've put everything into my own mind. I've just seen it, again it was just replaying, remembering what I had.
Interviewer: "So would you feel in that case when you heard this, would you feel that there was your husband's presence, and your daughter's presence within the space with you?"

Participant 3: "Oh, yes! Ah ha. Yes, Again that was when I completely forgot where I was and was just thinking back to my own kitchen."

The Coded Moments studies have shown that the hidden nature of a QR-code actually makes the works more intriguing and people wanted to find out more what was behind the codes. Most participants did not know what to expect when they scanned the first artwork code, which meant that meant that the audio came as a bit of a surprise for many.

Participant 4: "I don't know if I really had any (expectations)... I think I was surprised just to hear the music. I think I expected to hear you speaking in the background about what was happening. So I guess I got quite a pleasant surprise then because it was more of an experience. You know, you're sort of looking at this thing and it comes to life with the sound as well."

Participant 5: "Before I scanned it I didn't know it was going to be... sound. But I guess the clue should have been in the image... I was a bit surprised, but in a good way."

These comments show positive first responses to the digital, hidden content behind the artworks, where the surprise element of the works delighted many of the participants. This trust that the participant puts in the artist is not to be taken lightly. There is the potential here for the artist to exploit such trust and lead their audiences down much darker paths. The functionality that QR-codes afford means that malicious acts could take place, such as malwear and viruses being downloaded to a user's phone, or even the terrible consequence of simple scan being a trigger for detonating a bomb, so the artist must be acutely aware of the ethical position the audience's trust presents. In the Coded Moments works, because of the order in which the works were presented to their audience they were

lulled into a sense of security nurturing a belief that the tone of all the works would be in a similar delightful vein. However, the works that the artist had made dealt with a range of emotions, and was aware that some participants might find them disturbing, so presented them in a way which was sensitive to audience responses, as can be seen by the following exchange about the artwork 2:17am 8 weeks.

It shows that the artist can manipulate the audience, getting them to view works that may not otherwise engage with, but illustrates how to gently lure participants out of their comfort zones without realizing it.

Participant 6: (in relation to the artwork 2:17am) "Actually, when I got to there I wondered why they weren't done in chronological order (all the titles had dates on them). I wondered if there was a reason for that, because I naturally assumed they were in order, and that's the point when I realized that actually they're not. I thought there must be some reason you've decided to do it that way.
Interviewer: "Well, first of all when you heard the crying, what were your thoughts when you heard it?"

Participant 6: "Just that that's quite an unpleasant sound in a way. It's quite a grating noise, and I suppose just imagining that going on for a long time and not being able to do anything about it, and how that might make you feel..."

Interviewer: "That's why I didn't put it first, (Chronologically this 'should' have been the first piece) because I didn't want people to hear that, and think that the whole lot were like that and not investigate the rest."

Participant 7: "I was waiting till the sound started before I seemed to focus on it. I think it (the sound) made me feel kind of jittery, or kind of on edge. I
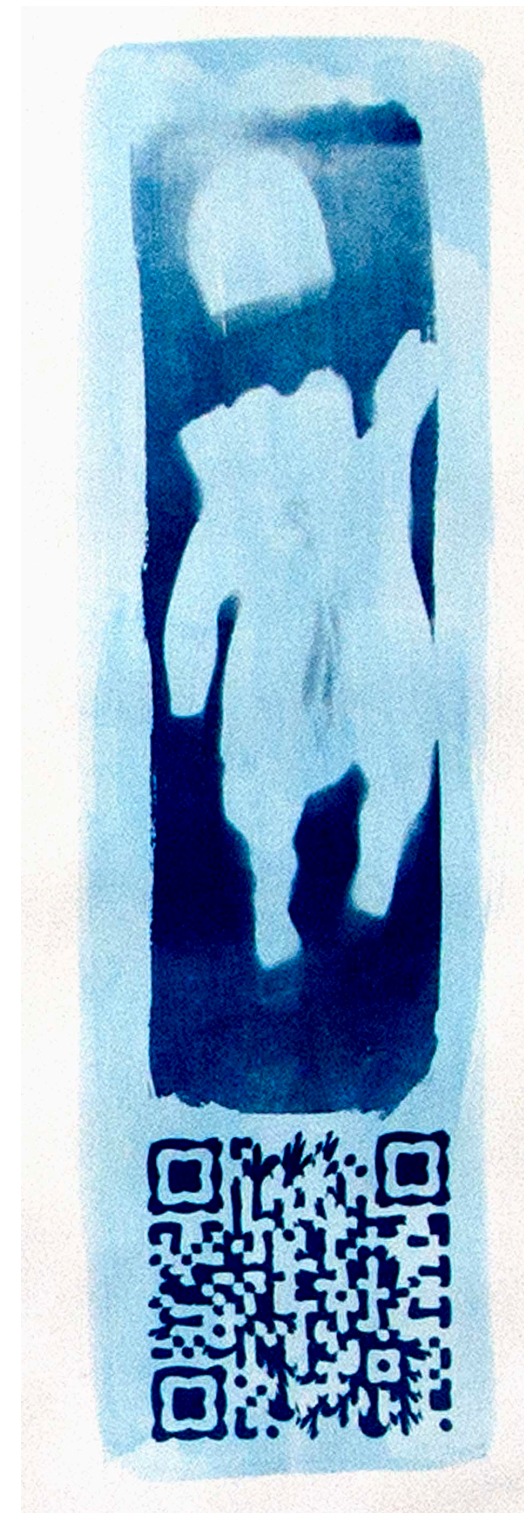

Figure 3. *2:17am, 8 Weeks,* 2011, Simone O'Callaghan. Cyanotype, 55 cm × 110 cm. Image courtesy of Simone O'Callaghan. © Simone O'Callaghan, 2011. Used with permission. (Please scan the QR code contained in the Figure to access the digital content.)

was thinking of the times when I was very very sleep deprived, by myself, just completely obsessed with breastfeeding. And really tired and really sore and just in a different zone altogether. And also I thought in the pattern (referring to QR-code) it looked shaky."

Breastfeeding was an issue that was subtly introduced in a number of works, reflecting the artists' own experiences. The artwork *Expressing and Feeding* is one of the key works in this area and was seen by some to touch on the taboo.

The image itself is fairly benign, where those who may consider the topic taboo haven't the life experiences to read or understand the image, and those who understand the image have probably been through the experience and are unlikely to find it taboo. However, the implications of this are that the QR-code can become a means of getting people to engage in an artwork outside their comfort zone if lulled into a false sense of security by artworks that surround it, which use the same technology, but which stay within levels of comfort. What this means for the artist is that they can hijack audiences who are interested in playing with technology and direct them to engage with concepts they might never otherwise do so had they not been 'tricked into it.'

Participant 8: "This one (the artwork *Expressing and Feeding*), again, actually, I found the most intimate sound. It felt like this was really, like I wasn't sure if it was breastfeeding or bottle feeding, but even then it felt quite… immediate, not immediate, but it felt like the most intimate of them all and It just felt quite awkward, slightly, to listen to that, not in a bad way, just because its something I'm unfamiliar with. It felt like a really close mother-child relationship or parent-child relationship and a very intimate thing. You wouldn't normally access that, so I found it slightly awkward, but not offensive or anything like that but just access

Figure 4. *Expressing and Feeding: 9 months*, 2011, Simone O'Callaghan. Cyanotype, 76cm × 110 cm. © Simone O'Callaghan, 2011. Used with permission. (Please scan the QR code contained in the Figure to access the digital content.)

to a sort of intimacy that you don't expect to have from looking at an artwork."

Balancing out this ethically difficult element of seemingly using a popular and affective technology to lure an audience in, is the element of participant control. With the use of QR-codes also comes also an element of empowerment where it is the audience who guide when and how their experiences will occur. They are the ones to choose whether they interact with the works, when to interact with them, when to trigger the audio, when and even if to engage in further than viewing in the traditional sense. As one participant stated:

Participant 9: "It was this idea that it was in MY hand. I'd adopted it by then, so I could read it at my paces, so there was a certain sense of- It was on MY palm, MY hand. It wasn't on the wall and that the words were in MY hand. So there was something in that. I might be post-rationalizing it now, but I suppose that I'm holding the words, which is a different relationship."

With QR-codes, interaction becomes an active 'opt-in' for the participant, not the default requirement to view the works, as in so many cases with interactive media, because the participant can still view the prints on the wall and take away something from their gallery visit should they not wish to take part in the digital aspects.

CONCLUSION

The perception that the works were of a personal nature combined with the discursive interview method led to greater intimacies being revealed/experienced by participants. The nature of interacting with these types of artworks in the gallery space, where people are invited to use a personal device to supplement their experience has profound implications for the presentation of artworks with QR-codes embedded in them. In this way people are bringing their personal digital spaces into the public gallery, and in doing so, are extending the gallery space beyond the physical confines of the gallery walls and onto mobile phones. Through the use of the mobile phone in graphically tagged artworks, presence is mediated, further bringing both the artists' and the viewers' personal lives into the gallery. The *Coded Moments* iterative studies showed that audio in the works, triggered both forward and backward presence, taking the participants out of the gallery space or bringing others into the space with them. Once presence was mediated, so too was intimacy in the *Coded Moments* artworks revealing that the way in which the audio was delivered to the audience was important – mediation via a mobile phone created a more personal scenario, particularly when the phone was held up to the ear.

Use of QR codes in art, combined with the affective nature of mobile phones opens up the potential for increased intimacy and mediation of presence in unexpected ways. Knowing that there is hidden interactivity embedded in a print can be provocative and inviting, for now there is also the means of 'unlocking' that can change one's initial perception of the work. Whilst the use of QR-codes in art can be seen to be giving audiences control over their experiences, it also provides the artist with an element of power over their audience that must be used carefully, with an awareness of the possible damage that may also be done. In best practices, the artist, or gallery should provide audiences with devices to interact with hidden

Figure 5. *Sunday Morning Serenade: 18 months*, 2011, Simone O'Callaghan. Cyanotype and 3 color etching, 55cm × 76cm. Image courtesy of Simone O'Callaghan. © Simone O'Callaghan. Used with permission. (Please scan the QR code contained in the Figure to access the digital content.)

content in the artworks, should they not have their own. This 'hiding place' for digital content can be used by artists to take audiences out of their comfort zones and engage in issues that may be contentious should the artist desire, but on the flip side, it can also act as a place to hide 'digital gifts' – aspects of the artwork which delight, intrigue and affect audiences in a positive way. ∎

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