



LEONARDO ELECTRONIC ALMANAC

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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.



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LEONARDO ELECTRONIC ALMANAC, VOLUME 19 ISSUE 4

Without Sin: Freedom and Taboo in Digital Media

VOLUME EDITORS

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NSA: No Speaking Aloud, Anonymous, 2013.

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 pantomime staged for 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, 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.

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?

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. The amputation of the hands happened while the state itself was merrily looking somewhere else, too blissfully busy 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 rooted within perceptions 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-cloud will 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 as the 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.

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Lanfranco Aceti

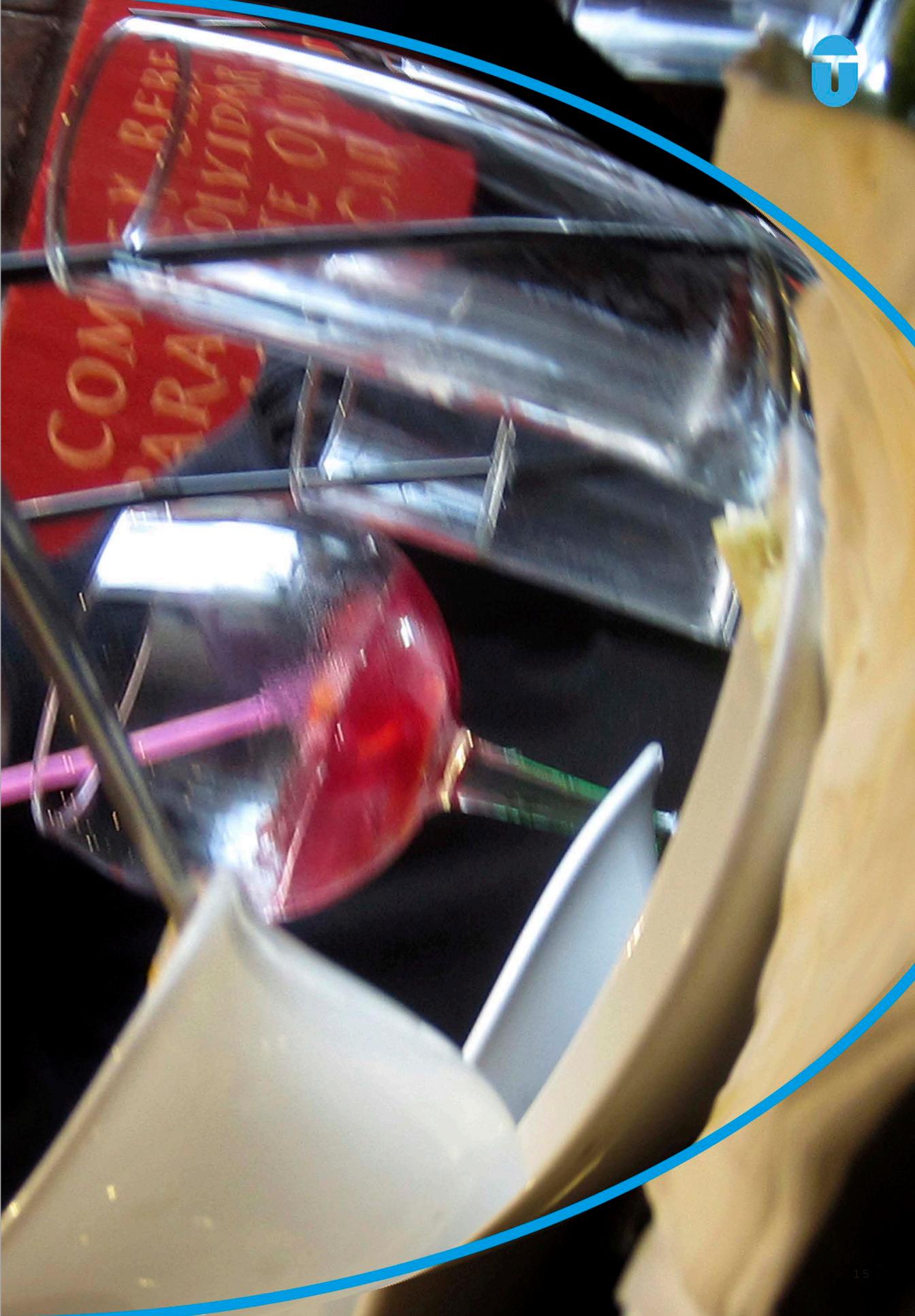
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1. Clive R. Boddy, "The Corporate Psychopaths Theory of the Global Financial Crisis," *Journal of Business Ethics* 102, no. 2 (2011): 255.
 2. Michel Foucault, *Madness and Civilization: A History of Insanity in the Age of Reason*, trans. Richard Howard (London: Routledge, 2001), 11.
 3. *Ibid.*, 101.



NSA: No Speaking Aloud, Anonymous, 2013.



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 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 of 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. ⁷ 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 subjection¹²

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 gathering¹⁷ 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 *Biopresence* 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? It 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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ALL KALAHARI
GUESTS, VISITORS
& DELIVERIES
MUST CHECK IN
WITH
CONCIERGE
➔

NSA: No Speaking Aloud, Anonymous, 2013.



RE-PROGRAM MY MIND

The Emotions (after Charles Darwin)

by

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INTRODUCTION

In *An Essay Concerning Human Understanding*, published in 1687, John Locke states:

*Let us then suppose the Mind to be, as we say, white Paper void of all Characters, without any Ideas; How comes it to be furnished? Whence it comes by that vast store which is the busy and boundless Fancy of Man has painted on it with an almost endless variety? Whence has it all the materials of Reason and Knowledge? To this I answer, in one word, from Experience: In that, all our Knowledge is founded; and from that it ultimately derives itself.*²

According to the Merriam-Webster Dictionary tabula rasa is defined as “the mind in its hypothetical primary blank or empty state before receiving outside impressions.”³

Steven Pinker, in *the Blank Slate* describes it as:

any differences we see among races, ethnic groups, sexes, and individuals comes not from differences in their innate constitution but from differences

ABSTRACT

Rapid changes in science, technology and new media art will lead to more sophisticated ideas about what it means to be human. This may reposition/refine our relationships with machines and animals with the human functioning symbiotically as a modifiable database-like structure that can be accessed perhaps unknowingly by others, globally over the internet. Genetically emotionally or otherwise enhanced individuals could become the fashionable norm; synthetic biology could replace plastic surgery, with the further complication of not knowing where those genetic modifications will take them as individuals or us as a species.

This paper documents the development of the new media art project The Emotions (after Charles Darwin) whose collaborators include the Brain Mind Institute (autism research), Joseph LeDoux (a neuroscientist researching survival circuits associated with emotions)¹ and Roddy Cowie (a psychologist researching audiovisual representation and emotions, to be explored separately). The Emotions first tries to establish the existence of the universality of emotion perception and classification as empirically documented by the Brain Mind Institute. Secondly, it tries to establish the universal biological basis of emotion as evidenced by Joseph LeDoux’s work. Thirdly, it suggests the potential for subsequent futuristic manipulation and possible misuse through synthetic biology alone or combined with other technologies.

*in their experiences. Change the experiences- by reforming parenting, education, the media, and social rewards- and you can change the person. Underachievement, poverty, and antisocial behavior can be ameliorated; indeed, it is irresponsible not to do so. And discrimination on the basis of purportedly inborn traits of a sex or ethnic group is simply irrational.*⁴

If the genetic aspects of behavior can be mastered, *The Emotions (after Charles Darwin)* suggests the

potential for the mind to be genetically reprogrammed to an initial more agreeable tabula rasa state, enabling nurture to subsequently take over, and influence the individual to develop more desirable cooperative and universal societal reactions and behaviors toward outside experiences.

Princeton’s WordNet web dictionary defines universal behavior as a “convention or pattern characteristic of all members of a particular culture or of all human beings; some form of religion seems to a human universal.”⁵

Donald E. Brown, an anthropologist, shares that view and believes that some behavioral traits are common to all humans irrespective of culture.⁶ For example males engage in more coalitional violence and the facial expressions of anger, contempt, disgust, fear, happiness, sadness and surprise are human universals. He compiled a list of approximately 400 behavioral traits and their implications as an appendix to *The Blank Slate: the Modern Denial of Human Nature* by Steven Pinker.⁷

Although Charles Darwin was incredibly prescient in his discoveries about what role the nervous system might play in regulating emotions, developments in neuroscience did not begin until well over a 100 years later, partially due to the lack of sophisticated recording and analytical tools such as neuro-imaging⁸ and computation made easier, enhanced through software algorithms and applications executed on computers.

The Emotions attempts to prove the universality of emotions by transcending cultural categorizations such as species, race, age and gender and instead relates emotions to their neurobiological origins and functions. It further suggests that once empirically known; that this information can be used to genetically or technologically alter human emotion(s) in individuals or groups to create new beings or new emotional interiors that better conform to culturally desirable behaviors. This raises bioethical questions about the future nature of life for humans and animals; the embodiment and containment of the self and its symbiotic integration and enhancement with technology and machines.

According to Susan Merrill Squier, in *Liminal Lives: Imagining the Human at the Frontiers of Biomedicine*, human existence has changed.

*No Longer is human existence defined by its unique temporal and spatial coordinate; one body, one life in a specific space and time. Instead human life is increasingly defined by the agential, instrumental deployment of resources for bodily renewal, both its temporal and spatial context subject to extension or translocation.*⁹

As Joanna Zylińska states in her book *Bioethics in the Age of New Media*:

*This is by no means to suggest that the human has been reduced to information in the age of new media and that we can therefore do away with embodiment; it is only to point to the emergence of new discourses of the human which undermines its centering around some fixed biological characteristics or moral values.*¹⁰

She adds:

*The human does not disappear from the kind of nonhumanist bioethics envisaged here: in fact, it functions as its strategic point of entry. What we are dealing with, however, is not so much a 'human being' understood as a discrete and disembodied moral unity but rather a "human becoming;" relational, co-emerging with technology, materially implicated in sociocultural networks, and kin to other life forms.*¹¹

Neil Badmington in *Alien Chic* talks about how Donna Haraway's *Cyborg Manifesto*¹² first deconstructed humanist relationships such as organism/machine, physical/non-physical, reality/fiction, human/animal, and self/other and replaced them with chimeras; cyborgian fabrications of machine and organisms.¹³ He goes on to say that the latest trend in post-humanism seems to involve merging with animals, which ironically was not a concept alien to Darwin 140 years ago when he studied, documented and sought to define similarities with animals' emotions and our own. Badmington quotes numerous television and news reportage from *Newsweek* to *Nature*, who discovered that reason, tool use, tool making, altruism and language are not unique to humans¹⁴ neither I might add, is making or performing music.¹⁵

DARWIN AND NEUROSCIENCE

Over a hundred years ago, Charles Darwin theorized that the universality of emotions existed in humans and animals at a biological level. He posed questions such as can we feel happy, sad or fearful when we are alone or are emotions a unique result of being with others in a social situation? He suggested that the reason for the universality of emotions was due to an underlying biological basis that communicated our needs to others. We experience an emotion and specific areas of the brain send signals to specialized muscle groups that respond to communicate our feelings.

Darwin believed that the following were responsible for most of the expressions and gestures involuntarily exhibited by humans and animals while experiencing emotions: habitual actions initiated by certain states of mind in order to relieve or gratify certain sensations, habitual inverse actions initiated by the exact opposite states of mind, and actions initiated by the nervous system mostly independent from both will and habit.¹⁶

In post Darwin times, scientists study what regions and chemicals in the brain control different emotions and if these regulators can be modified to elicit alternative results. For example, emotions are studied to determine their affect on the immune, cardiovascular and endocrine systems. There is also the possibility for misuse, what if we could invoke certain emotions in people at will through a drug or by permanently or temporarily altering structures in their brain? Perhaps at the same time we could remove their ability to feel remorse or guilt. Could this form of genetic intervention be used randomly against individuals or during war-time to induce people to commit violent acts?

The neuroscientist Joseph LeDoux says the brain has not evolved to the point where connectivity exists for cognitive systems to control our emotions. But even so, he says that wouldn't necessarily be good, because Mr. Spock (a character lacking in human emotions from the 60's TV show *Star Trek*) may not be the ideal kind of human that we would like to become.¹⁷ Additionally, LeDoux talks about futuristically control-

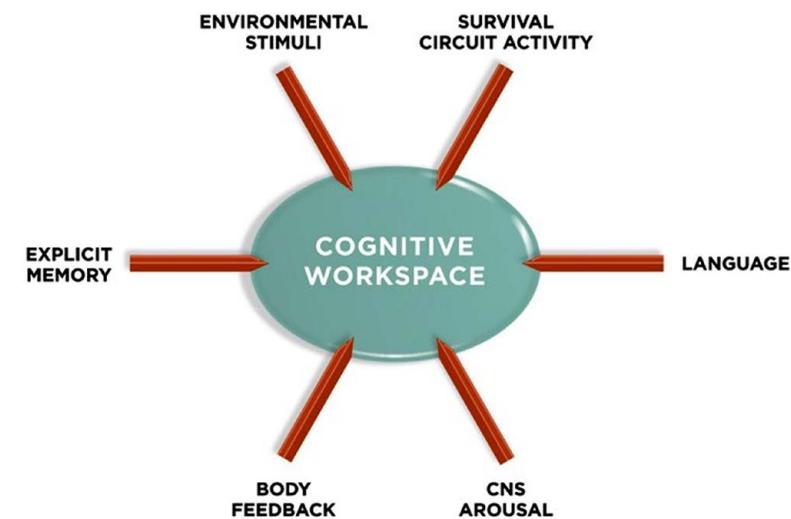


Figure 1. *Ingredients of Feelings in a Cognitive Workspace*, diagram by Joseph LeDoux, 2012. © Joseph LeDoux, 2012. Used with permission.

An emotional feeling is hypothesized to be a representation of a global organismic state initiated by an external stimulus. The representation includes sensory information about the stimulus and the social and physical context, the active survival circuit, Central Nervous System arousal, body feedback and mnemonic information about the stimulus situation and the state itself. When such a global organismic state is categorized and labeled a conscious feeling of a certain type (e.g. a feeling of fear, pleasure, disgust, etc.) results. To the extent that any of these components differ in human and nonhuman species, the nature of the resulting state would differ as well.

ling undesirable emotions such as fear through drug regulation, stating that once we can identify the neurotransmitters that are involved in producing fear, we could create a chemical profile of fear in the amygdala and then develop a drug to attack it.

The amygdala is an almond-shaped structure in the frontal portion of the temporal lobe near the hippocampus in the brain that allows us to both feel and perceive negative emotions. It regulates our reactions to events that are important for survival such as responding to the presence of danger, sexual partners, enemies, food and those in need. The amygdala works as a system with other related structures and plays an important role in emotional regulation. The amygdala's connectivity to the neo-cortex is much stronger than the neo-cortex's connection to it (as shown in David Amaral's studies of primate brains),¹⁸ which in part explains, according to LeDoux, why emotions are often hard to turn off once initiated. The body also releases hormones and long acting substances at the same time we experience strong emotions. Additionally, there is a relationship between the visual system and emotions. In *The Expressions of the Emotions in Man and Animals*, Darwin talks about the importance of visual cues when seeking mates, prey and avoiding danger, therefore it is not surprising that studies show that the visual cortex is more activated in response to visual emotional stimuli than visual non-emotional stimuli.¹⁹

Darwin acknowledged individual variance in emotional reactivity due to differences in development (for example he noticed that insane persons had strong passions which they openly expressed). But he never addressed the idea of emotion regulation which didn't come into being until the development of neuroscience a hundred years later.

Richard Davidson defines the study of individual differences in emotional reactivity and emotion regula-

tion as affective style consisting of the threshold to respond, the magnitude of the response, the rise time to the peak of the response, the recovery function of the response and the duration of the response. The duration is important in understanding individual differences and can also indicate psychopathology since some mood disorders are associated with either an abnormally early onset or inability to turn off a response quickly enough.²⁰

EMOTIONS

The Emotions is a multi-channel photographic, possibly 3D interactive, video done collaboratively with neuroscientist Joseph LeDoux at New York University, the Brain Mind Institute in Switzerland (to aid them in their autism research), and Roddy Cowie (Queens University Belfast), about the universality of emotions on a neurobiological level and the potential for futuristic misuse through genetic and or technological modification.

Four individual panels will display 2D or preferably 3D (designed using motion capture equipment) photo based animated portraits of men, women and children of all ages and races, each expressing a specific emotion such as happiness, sadness, fear or anger. Each panel's images will morph/blend to form a continuous stream of soundless images whose emotion will not be identified so as to allow the viewer the ability to form their own conclusion as to what emotion they feel is being expressed. *The Emotions* can be adapted for interactivity (using embedded sensors) where the general mood of the viewer(s) is sensed and all four panels adapt to reflect the mood(s) of the viewer(s). Additionally each emotionally nuanced video frame for a given individual functions aesthetically to form a composite animated portrait of that individual. Ideally 20 to 25 individual animated portraits consisting of ap-

proximately 60 frames each will be created per each of the four video channels (using artificial intelligence like behaviors, perhaps created with Maya scripting language and with video editing done in Adobe Photoshop Extended, Premiere and AfterEffects software).

Shortly after *The Emotions* was accepted into the Rhizome artbase collection at the New Museum in the fall of 2007, I was contacted by Britt Russo, a neuroscientist who had seen it on their web-site. She asked me if I would be interested in collaborating with her lab at the Brain Mind Institute in Switzerland by allowing them to use my photographs (they had never used photographs from life before, only those of staged actors) for research in autism. I knew I would be primarily interested in the results of the control group as I wanted to document what was perceived as 'normal' or 'neurotypical' and therefore universal, and learn more about emotional response in general; its measurement and analysis by including the observation of autistic patients.

Emotion Testing in the Brain Mind Institute Lab

In the lab, functional magnetic resonance imaging (fMRI), Electroencephalography (EEG) and magnetoencephalography (MEG) were used to visualize brain activity and electromyography (EMG) was used to measure facial muscle activity of autistic subjects while they viewed images of human emotional facial expressions (autistic people display different brain activity patterns and facial muscles reactions than normal or 'neurotypical' people). A Tobii eye tracker was used to trace the path of the subject's eyes, while they viewed images.

According to Nouchine Hadjikhani's research, Autism Spectrum Disorder (ASD) was thought to be related to the dysfunction of the mirror neuron system that plays a critical role in the perception of other people's feeling and the interpretation of facial expressions and their meanings.²¹ The lab's primary area of study was the functional and structural integrity of the social cognition network as it relates to autism and the amygdala's connectivity to the mirror neuron system.

Figure 2. Network of Face Processing Areas, diagram by Nouchine Hadjikhani, 2013. © Nouchine Hadjikhani, 2013. Used with permission.

A. Face processing deficits can arise from dysfunction of one or more elements of the network and to or from each element's termination.

B. The face identification system is activated in both healthy controls and in individuals with ASD when cued to look at eye-region, however areas of the MNS) are activated in healthy controls but remain quasi silent and exhibit a thinner cortex in individuals with ASD.

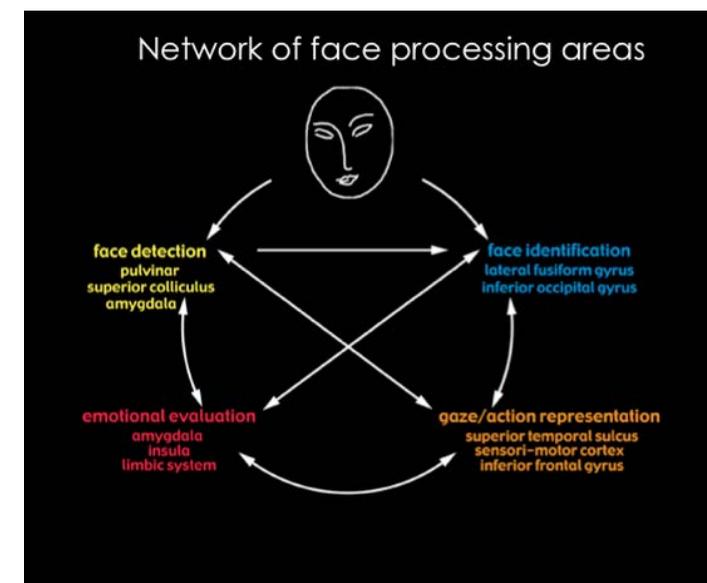


Photo Preparation for the fMRI Scanner

Russo sent me instructions how to prepare my photographs to make them uniform for the MRI scanner experiments using the autistic subjects and the control group. Background elements were masked out. Each image was cropped from the hairline to the chin and formatted so that the eyes were always in the center, so that the autistic person did not have to move their eyes to focus on a red fixation cross ²² while in the MRI scanner. Hadjikhani had discovered that when told to focus on a red fixation cross, the fusiform face area became activated in autistic brains, just like it was in non-autistics (earlier studies had failed to show activation probably because the autistic individuals were looking at the backgrounds instead of focusing on the faces in the photographs).

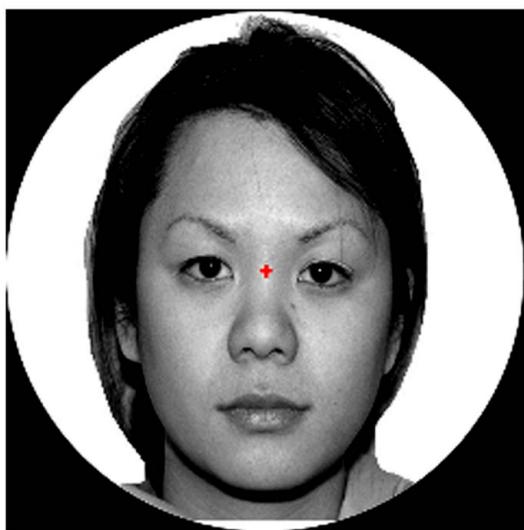


Figure 3. Modified photo for fMRI experiments, photo by Debra Swack, 2007. © Debra Swack, 2007. Used with permission.

I adapted a lot of the lab's methodology in the way I prepared images for their experiments, how I cropped, masked and grouped them (according to the results of the control group) for each separate video channel. I sent Britt a color-coded schematic of what I envi-



Figure 4. Color-coded 4 Channel Video Schematic for 'The Emotions' (prior to masking), photo by Debra Swack, 2007. © Debra Swack, 2007. Used with permission.

sioned for 4 channels of my video consisting of the emotions happy, angry, surprise and sad. I wanted to relate each photograph graphically and logically.

Plutchik's Emotional Index

Russo sent me a schematic representation of Robert Plutchik's "Emotional Profile Index" comprised of eight basic emotions arranged as four pairs of opposites and their increasingly less intense variations. The cone's vertical dimension represents intensity and the circle represents degrees of similarity among emotions. ²³ Plutchik believed that emotions were evolutionarily adaptive and part of a process involving both cognition and behavior.

According to *The Handbook of Psychological Testing* by Paul Kline, ²⁴ Plutchik's Emotional Profile Index is based on eight basic emotions which are joy, acceptance, surprise, fear, sadness, disgust, expectation and anger. Individuals choose from pairs of personality traits that describe them and each trait "results from the mixture of two or more primary emotions. Shyness implies fear; for example, gloominess sadness." ²⁵ The results are then plotted on a circumflex arranged according to similarities and bipolarities.

Russo had the control group categorize my photos by choosing one of the words from the entire diagram instead of just limiting them to one of Plutchik's eight basic emotions in order to generate a more accurate rating of some of the more subtle photographs.

After the Plutchik test, an eye tracking pupillometry study was conducted on the control group subjects to systematically rate each photo by its emotional intensity followed by a fMRI study. I could then select images by emotion and or emotional intensity for the video (such as faces rated high intensity (terror), medium intensity (fear) or low intensity (apprehension).

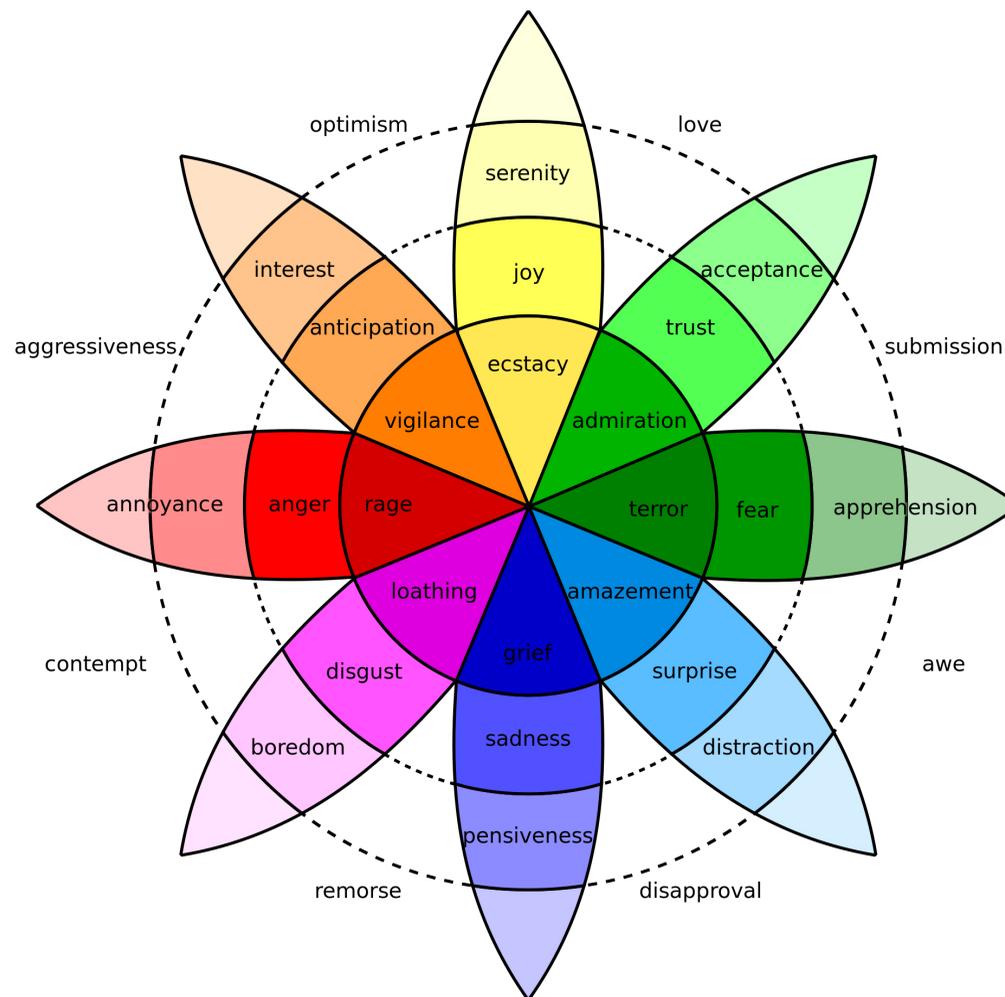


Figure 5. Plutchik's Emotional Index, original diagram by Robert Plutchik, 1980, provided by Machine Elf 1735, 2011. Used with permission via Creative Commons Attribution-Share Alike 3.0 Unported license.

In addition to defining each of the 4 video channels by emotional category and intensity, I could also color-code each video channel by relating it to its associative symbolic color as it appeared on Plutchik's chart.

Additional Emotional Testing

The lab administered Oxytocin and using the eye tracker, found that Oxytocin reduced activation of the amygdala enabling the participants to increase their amount of direct eye contact and better detect emotions in others. ²⁶

My photographs were sorted into direct and averted gazes (the brain responds more dramatically to direct gazes) and grouped into children and adults. Two balanced sets were created in terms of age, sex, emotion and intensity.

A pilot study was conducted to look at the effects of image order on each subject's ratings. If presented one at a time, ratings could be unduly influenced by the previous photo, for example, a mildly sad photo following an intensely happy one might be thought of as more intensely sad than if presented alone. Since

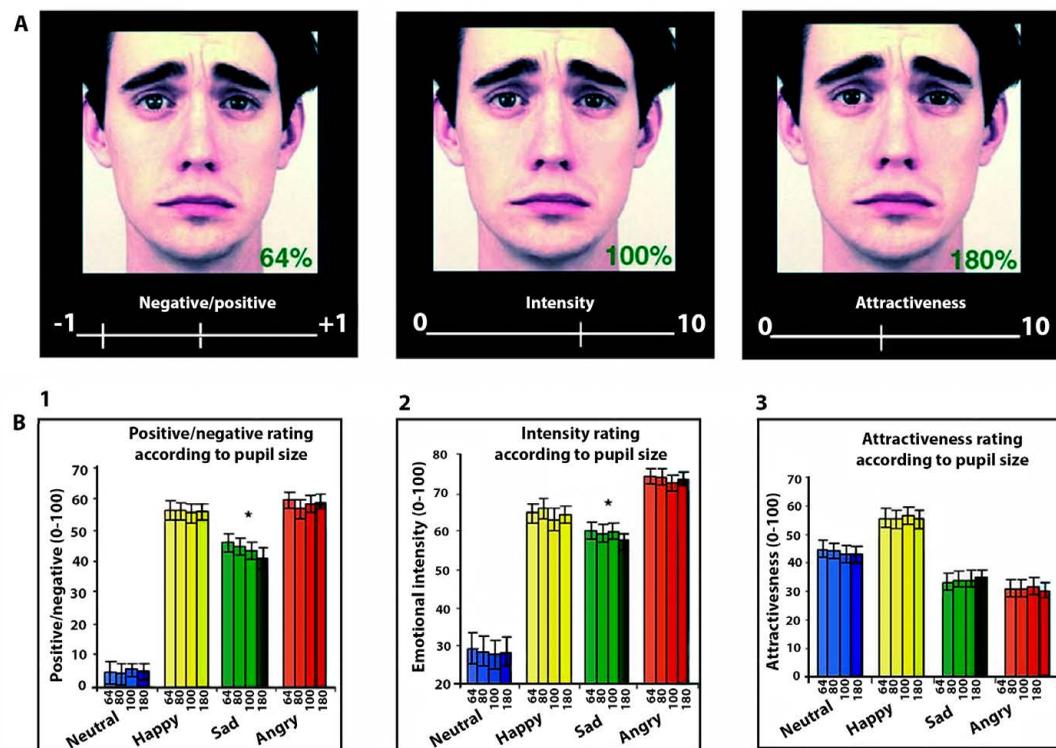


Fig 6. Stimuli used to rate each emotional facial expression on the dimensions of valence, intensity and attractiveness (A) and mean ratings (B) according to emotion and pupil size, diagram by Neil A. Harrison, Tania Singer, Pia Rotshtein, Ray J. Dolan, and Hugo D. Critchley, 2006. Used with Permission.

Small pupils in expressions of sadness are rated as significantly more negative than those with larger pupils. Sad faces with small pupils are rated as significantly more intense. Pupil size had no effect on attractiveness ratings.

the order in which the photographs were presented was found to affect a perceived emotion's intensity, an entire set of photographs was presented simultaneously, instead of one at a time, and subjects were asked to rate individual photos relative to each other.

I adapted this finding by being careful to place photographs with similar ranked emotions and intensity ratings together, contained within an individual video channel, which would have the affect of displaying a group of related photos simultaneously as described in the pilot study.

The lab performed a self-recognition test because autistics may have self-face recognition deficits. They randomly inserted photos that the subjects brought in

from home along with new ones taken by the lab (but not seen before the experiment by the subjects). The self-recognition test reinforced my idea about including a 5th interactive 'self-recognition' video channel (by hooking up a digital camcorder to a projector at the exhibition site) to record live emotional reaction including possible mirroring behavior of the emotions expressed in the other four channels.



Figure 7. Time-lapsed Images of an Individual Animation for the Mad Channel, animations by Debra Swack, 2013. © Debra Swack, 2007. Used with permission.

CONCLUSION AND FUTURE WORK

The new media art project *The Emotions*; a multi-channel possibly interactive video consisting of panels displaying close-up graphic, moving images of men, women and children of all ages and races, each expressing a specific emotion such as happiness, sadness, fear or anger (as categorized by the results of the control group) exemplified Darwin's ideas about the universality of emotions on a biological level supported by the research completed by Hadjikhani at the Brain Mind Institute in Switzerland and by neuroscientist LeDoux at New York University in New York. Ongoing work will include incorporating cutting-edge methodologies used in emotion-related research and cutting-edge ways to represent these ideas (perhaps incorporating robotics, artificial intelligence) in a visual or audio-visual fashion either as an enhancement to *The Emotions* or as a companion piece.

If emotions prove to be universal at a biological level, how can we modify them to elicit more desirable behaviors? Does *The Emotions* bring up suggestive ideas about genetic and technological modifications of emotion regulation of the future? Is this ethically okay or is it taboo? The Encyclopædia Britannica defines taboo as "the prohibition of an action based on the belief that such behaviour is either too sacred and consecrated or too dangerous and accursed for ordinary individuals to undertake." ²⁷ Where do we draw the line between the rights and expressions of the individual versus the society that the individual belongs to? Is it taboo to interfere with an individual's

feelings if they are not socially acceptable and which may or may not result in unacceptable behaviors?

In *My Mother was a Computer* by N. Katherine Hayes, she states "where the Holocaust and other atrocities provide horrifying examples of humans not counting as persons, intelligent software packages offer the spectacle of bots being mistaken for human interlocutors." ²⁸ She later states that:

we are both in the world and of it- a truth that becomes only more inescapable as we create machines in our own image and envision ourselves as computational mechanisms like them. ²⁹

Although acceptance and performance of universally endorsed behaviors and characteristics are necessary for all peoples and animals to effectively communicate and co-exist within groups, one of the primary dangers in proposals such as *The Emotions* is that if we were to use the results of the control group to develop a range of acceptable universal behaviors and then alter a subject's emotional capabilities accordingly like a plastic surgeon would using synthetic biology and other methods, there may be unforeseen and equally undesirable consequences or dangerous side effects; both for the individual and for us as a species. For Example, the use of hormones like Oxytocin are not without problems. Oxytocin attaches to an Oxytocin receptor; a protein encoded by the OXTR gene and is used to increase trust among people (including those with autism) and make them more cooperative. An

article in Discover Magazine noted that Oxytocin's effects vary across cultures. Americans with a specific version of the OXTR gene were more likely to turn to their friends for support when distressed while Koreans with the same gene were not. ³⁰

As a last provocative thought Jordi Vallverd and Claes Gustafsson offer the following insight on the future of molecular biology, genomics and synthetic biology.

With the current advent of molecular biology, genomics, and most recently synthetic biology, we are again breaking through an imaginary barrier as now we have the ability to modify, edit, and create new biological entities by directly altering the biological source code – DNA. We are no longer limited to creating chimeras of naturally existing information, as is the case with classic genetic engineering. Instead, as the formal rules and grammar of biological information are gradually deconvoluted and gene synthesis technology improves, we now are able to create designed genetic templates for nonexisting proteins, replicative units, metabolic pathways, and, entire organisms. Synthetic biology is now emerging at the interface between chemistry, molecular biology, engineering, and computer science. ³¹

ACKNOWLEDGEMENTS

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Zoe Salditch is wonderful at Rhizome at the New Museum and I would like to thank them for accepting 'the Emotions' into the artbase without which I never would have been contacted by the Brain Mind Institute.

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