FCJ-002 Perfect Match: Biometrics and Body Patterning in a Networked World

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2 > Every day the urge grows stronger to get hold of an object at very close range by way of its likeness. (Benjamin, 1992: 217)

3 > When a body is in motion, it does not coincide with itself. It coincides with its own transition: its own variation. (Massumi, 2002: 4)

4 Life is increasingly concerned with traffic management. Home-work-play . life fractures in multiple directions and dimensions as we simultaneously move or wait in various queues in different modalities. Through this constant movement, this endless folding and unfolding into and out of various assemblages, movement happens at innumerable speeds and lives as many lives. These lives of constant transit invoke different infrastructures for their own distinct functionalities. More highways, more airports, more servers, more nodes on the global network of flows, we always need more, and it needs to be faster. As writers like Paul Virilio (1983), Manuel Castells and Jordi Borja (1997), Rem Koolhaas (2000) and others have powerfully shown, this ecology of commodified movement has material effects on urban planning, the life of cities, concepts of citizenship, and on the concept of life itself. We might move more, and through increasingly complex landscapes, but we are also more streamlined and proceduralised in these movements. As we slip seamlessly in and out of various modes of traffic, we pass through innumerable thresholds. At each of these thresholds we are checked, but only for a "little detail"– what is my credit limit? Am I carrying drugs? Where is my e-tag? Who am I, really? [1]

5 We move in so many modes nowadays that we are constantly in variation, we are quite literally integrated into the matrices of movement. Bodies and machines measure each other – scanning each other constantly, calibrating, adjusting and entwining in all kinds of new biotechnical rhythms. The transit we experience is both mass and individual and yet structurally they are a unity, they cannot be prised part from each other. Point to point traffic is facilitated through mass and regulated sets of structures and protocols, whether these be fibre optic cables and ASCII or the concrete streams of highways and their associated protocols of vehicle design and road rules. Simultaneously mass and singular, user and demographic, identity and pattern match, a new body navigates the datamasses of modern life. This new body is both body and life, or rather 'life in general – with the body as one pole and the population on the other' (Foucault, 1996:253).

6 How this body moves in the networks of everyday life is the question under consideration in this paper. But this question necessarily unfurls into multiple threads. For instance, if we can move simultaneously in multiple modes, then what kind of body is it that can exist in constant variation? What kind of new relations cohere in a world where one is necessarily fractured in order to stay in the loop of everyday life? Finally, how does power operate through these new relations of bodies to themselves in the complex cross patternings of networked life?

7 Bodies are increasingly becoming collectively integrated into informational processes, which are open to biotechnical forms of regulation. Techniques, like gene therapy, forensic science or biometrics are being pioneered in medicine, criminology and security. Fields that once molded the individual through bodily confinement and observation are dispersing and converging into the regimes of logistics and control. The politics of "passing" have never been more literal. In a world of bare identification people are no longer "interpreted" by moral standards but are authenticated at thresholds. Bodies are electronically scanned and name is matched simultaneously to body and database – a body of electronic traces – image archives and credit card purchases, social security information, and travel itineraries, each hooked into another body [of information]. Thus on one end we are dealing with flesh bodies and at the other we are concerned with a pattern match. Or as Deleuze notes: 'We're no longer dealing with a duality of mass and individual. Individuals become "dividuals" and masses become sample, data, markets, or banks' (Deleuze, 1995:180). On the one hand an individual is supposedly something that cannot be divided, yet techniques are proliferating in multiple fields which attempt to "know" and control the individual by measuring it. Measurement enables "one" to divide across infinite planes and dimensions and to reconfigure endlessly. As inventive as it is regulatory, under such conditions the term "individual" seems to

embrace utterly incompossible terms which nevertheless makes sense according to the network logic through which the (in)dividual increasingly coheres.

Biological passwords

8 > To say that power took possession of life in the nineteenth century,... is to say that it has, thanks to the play of technologies of discipline on the one hand and the technologies of regulation on the other, succeeded in covering the whole surface that lies between the organic and the biological, between body and population. (Foucault,1996: 253)

9 Quite a few industries did well out of the turbulence of September 11, 2001. One of the real winners was the biometrics industry. "Biometrics" – the corporate nomenclature for personal identification technologies – is an industry that is, quite literally, concerned with the metricisation and regulation of life. Spruiks from biometric providers are compelling: most control access systems work through something you have, like a card, or something you know, like a PIN. Both of these methods are transferable and thus unstable and insecure. Biometrics ties the access code to something that you are, something non-transferable, something singular – your body.

10 > 'Let me paint an image for you', says Ted Dunstone, CEO of Australian biometrics integrator and consultancy Biometix. 'It is a world where there aren't any keys to lose, or passports to check. A world where you interact seamlessly with technology, where personalisation is ubiquitous and devices recognise who you are in order to make life more convenient'. (Vida-Douglas, 2002)

11 The modes for measuring life are numerous: fingerprinting, hand scans, iris scans, retina scans, voice and face recognition. Less robust technologies are also being developed on gait, keystroke patterns and odour. But the principle is essentially the same: the identification of unique bodily characteristics via the algorithmic techniques of pattern matching. How robust any of these technologies are, depend, naturally enough, on the ecology of usage. For instance, retina scanning in which the eye is pressed against a laser light scanner in order to verify against the patterning of the blood vessels at the back of the eye is highly efficient (few false matches and false non-matches). It is also fast: the template for a retina match can be 10 times smaller than that for iris match. Yet retina scans require bodily contact with a machine, and this contact aspect often creates end user problems – seen by many as unhygienic. Thus the body must be captured, coded and scanned but not touched.

12 Currently the preferred systems for trialing are those in which the user is aware they are being scanned but have no physical contact with the machine. Also preferred are systems that avoid the rather obvious associations of biometrics to criminality, such as fingerprints. It seems strange that there isn't more concern being expressed about how quickly we are being compelled to patch our bodies into multiple networks of regulation (and expansion), given the rather transparent connections between the structures and operations of criminality and biometrics. Indeed in the public sphere biometrics systems have been initially trialed on those "exceptional cases" with the least rights, such as "known criminals" in Florida and asylum seekers in Britain. [2]

13 Biometric access control solutions are being trialed quite uncontroversially worldwide. Both Schiphol and Heathrow airports began trialing biometric systems before September 11. Countless others, including Sydney Airport have started trialing biometric systems since. In September 2002 the Australian Customs Services began trialing a face recognition system, SmartGate, with Qantas long haul cabin crew (Colley, 2002). By the end of 2004, Passports Australia is planning to introduce biometric identifiers in all Australia passports. Moreover, anyone wanting to travel to the US from 2004 or Britain from 2005 must have either a biometric encrypted in their passport or visa documents. And so, levered into position through the politics of crisis and fear, biometrics quietly moves out of the spaces of exception into the open circuits of capital and regulation and becomes part of the information architectures of everyday life. Anyone who resists patching their body into a global network of tracking and control, will simply not gain access.

14 In its current form biometrics only has real success as an identity verification, rather than a surveillance control system. However, the various US Homeland Security initiatives launched in the months after September 11 have seen biometric providers make big claims about the efficacy of face recognition technology as a form of surveillance/control.

15 As part of its Homeland Security Solutions initiative, Unisys is partnering with leading biometric technology companies like AcSys Biometrics[a face recognition system] to develop and deliver tools to accurately identify individuals as a way **to control access to physical environments and information systems**. As part of an ongoing R&D project with the U.S. Department of Defense, Unisys will be integrating AcSys Biometrics solutions into an integrated positive access control solution. (Acsysbiometrics Press Release, 2002; my emphasis)

16 Attempts are ongoing (and competitive) to develop a fast and efficient face recognition system which requires no participation from subjects at all. Such a system would have to be able to deal with a host of contingencies specific to vision technologies – light, angle distance, plus those specific to the body – ageing, variant hairstyles, makeup and so on. However, despite attempts to use biometrics as a form of surveillance, it is a scanning technology rather than a vision technology, suggesting that the logic of biometrics is more suited for control rather than discipline. For instance, in August, 2003, Tampa Police department returned face recognition software supplied free by developer, Visionic. [3] The purpose of the software was to scan faces in crowded entertainment districts and compare them to a database of known criminals. It didn't work. After two years of use, the system did not provide a single positive match. Somewhat unsurprisingly the department is keeping the closed-circuit cameras in place, so officers can continue to physically monitor areas during busy hours. For a while anyway, the police are sticking to the system of control they know – surveillance and profiling. Nevertheless face recognition systems that seamlessly merge the technologies of discipline (like surveillance) and the technologies of control, like automation and demography are the holy-grail of control systems.

17 Biometrics are the ultimate in the 'opening up of our bodies to the harddrive of the world' (Murphie, 2003) . By measuring and statistically analysing the body as biological data biometrics creates the perfect match for porous borders, making verification non-transferable by mapping it onto a singularity – the uniqueness of every body. In a world of multidimensional movement, biometrics is becoming the means by which the singularity of our bodies connect quite literally into the networks where our multiple selves reside. The individual bodily connects to her divided self through regulated networks of power rather than as an individual "seeing herself" through representational metanarratives. What is important for identity now is how the points come together in a scan. For instance, do ten points correctly correlate in an iris scan? The individual in a biometric world is not "seen" as a whole body. The individual has no discernible outline, it is seen in fragments – a pattern match of the eye. Thus the algorithmic logic of the database replaces the linear logic of narrative and character development in the structural formation of the individual. In this sense then the individual is a networked becoming rather than a Cartesian positioning. [4]

18 The ability to extend our bodies across space and time and connect with other systems has resulted in a strange arrest. These new relations of bodies – to themselves via gene banks and biometrics or to other bodies via travel and telepresencing – create new dynamics and also new modes of regulatory power which seem to mark a radical shift in the way we need to think about the technologies of "motion capture". In a world of movement where variability and instability is constant, process becomes a pivotal focus of control. Access into the nodes of these global networks of circulation becomes then a mode of adhering on some level at least to the regimes of standards and protocols. And so are locked in code, our bodies a literal archive of reconfiguring data processed in seconds we traverse the thresholds of everyday life. If we are doubled on the wrong database we are denied access – we are on every level stopped. Biometrics sidesteps negotiations over identity by scanning the body directly into the protocols of authentication. This is where the strength of biometrics lies – not in the vision modes of the disciplinary technologies of surveillance – rather in the scanning technologies of logistical life where movement is not tracked in linear flows but logged on at various thresholds.

19 In biometrics, your body is your password – freed from having to remember (a pin number or word), unencumbered by documentation (like a card or keys), you are free to move – as long as you match. But to merely claim that we have become simulacra is to miss the point of this particular becoming. The logic of substitution works differently here. The match between body and code is not arbitrary but utterly motivated. The matching of body to code coheres as a password, which adheres to a specifically biotechnical syntax rather than "standing in" for a precept.

20

In considering control and how it relates to movement, one needs first to think of patterns rather than precepts. It is common to think of traffic management as a form of corralling, of simply partitioning different kinds of movement away from each other. And in a sense, this partitioning does occur, but not through traditional modes of confinement (the erecting of barriers and walls). Instead it operates through the patterning of modalities into different streams controlled at various thresholds. This is not to deny the capacity of power to exclude rather it is to assert that regulatory forms of power structure necessarily distinct relations from disciplinary ones. We are no longer managed through confinement (the home or the factory), but through the free-floating controls of open systems. Control now is not just about molding a subject (a disciplined student, a fine young man), but a continual process of modulation: '...like a self-transmuting molding continually changing from one moment to the next' (Deleuze, 1995:179).

21 In discussing how the notion of containment can work across the distributed networks of power, Brian Massumi notes:

22 > Containment has more to do with the patterning of exits and entries across thresholds than with the impermeabilities of boundaries. This is as true for the regulation of codified event spaces as for spaces characterised by coding. What is pertinent about an event space is what elements it lets pass, according to what criteria, at what rate and to what effect. (Massumi, 2002: 85)

23 This patterning across entries and exits as a form of control is a field of activity that operates at many dimensions. Traffic management for instance is based on patterns inferred from a range of data that turns the seeming chaos of traffic into a series of temporally /spatially coordinated flows. Lights are programmed differently for peak hour so to keep the patterns of traffic smooth and predictable. Bar coding at any corporate outlet contains flow by matching the lines on the bar codes. Patterning is something quite different from representation. Scanning is a very different "look" to that of the camera. The "look" here is for verification not representation. The look here is asignifying but nevertheless reveals a crucial connection between the biocultural operations of semiosis and bodies.

Motion capture– from optic to haptic

24 In the Atlas of Emotion, Guiliana Bruno explores a semantic connection across the homonymy of site and sight. By finding semantic resonances across terms which are by definition similar in form but not in meaning, Bruno opens up many of the paradoxes that networked ontologies stitch together daily as site and sight technologies converge:

25 > Locked within a Lacanian gaze, whose spatial impact remained unexplored, the film spectator was turned into a voyeur. By contrast when we speak of site seeing we imply that, because of film's spatio-corporeal mobilization, the spectator is rather a voyageur, a passenger who traverses a haptic emotive terrain. (Bruno, 2002:16)

26 The chronic relation of voyeurism that, according to Susan Sontag, is the legacy of photography has now co-evolved with the chronic compulsion to move – a legacy of dispersive capitalism. Technologies of vision like photography, which apprehend moments through distance and a lack of intervention, necessarily change when managing representation is no longer seen as necessary for galvanizing collective action (for instance, the ridiculous spiraling spin on Iraq's "Weapons of Mass Destruction"). In this schema, evidence becomes a rhetorical shell and surveillance morphs into the direct intervention of checkpoints. Therefore power is not only made operational through panoptical vision machines but also by controlling mobilisation via the haptic techniques of information architecture. Thus the collective arrangements of semiotics are reordered yet again through workings of biopower. When Félix Guattari speaks of the immersion of individuals into a network of ever more infantile relations of dependence, this calls to mind not only the increasingly restrictive bureaucratic nets around rights and obligations but also the more obvious infantilism of "for us or agin us". Yet in parallel dimensions the world is being written in entirely new ways, connecting across new networks accessing new realities.

27 > On the one hand there is the infantilisation of the production of subjectivity, with the intense binarisation of messages, uniformisation and the unidimensionalisation of relations to the world and, on the other, expansion of other non-denotative functions of language: the compositions of rhythms and the unprecedented production of relations to the world. (Guattari, 1995: 18)

28

In relation to technologies of motion capture, the idea that non-denotative functions of semiosis are expanding is interesting in relation to the shift from photography and evidence, to scanning and control access. It is indeed a crisis of representation when things are no longer dependent on how they look, when identity is not formed through the spectral connection of light and shape but through patterns cohering across networks. And so code – itself a term that resides in so many fields of action from codex to rule, from military ciphers to genetic science – evolves again and connects meaning to machines, bodies to hardware, mixing the hard, the soft and the ineffable of the world. In the move from visual to haptic codifications, code and contact collide.

29 Biometric systems realise visual representations, such as the complex pattern of striations in the iris or the contours of the palm, and render them as numeric representations (statistical variables). Algorithms can then be deployed to match the specific variables of a body that is now data. The increase of biometrics technologies (along with DNA mapping and a whole range of biotech industries) seems to signal a new development in the very ancient "sympathetic magic" of mimesis – from the visual to the algorithmic. Benjamin noted that the resurgence of the mimetic, with the rise of imaging technologies such as photography and film, opened up new corporeal knowledges of an optical unconscious through faculties such as zoom or slow motion. More recently this has been occurring through compositing or non-linear techniques. In other fields of micro-imaging, gene mapping has opened up whole fields of new becomings. The move to black-boxed algorithmic forms of mimesis must also bring some new potentialities for the body.

30 Algorithms would seem ideally suited to a multivariate life under regulation. Life is flattened onto one ontological plane and approximated at neural net processing speed and according to the algorithms of probabilistic statistics. With the rise of biometric systems of control access, life does become quite literally a pattern match and identity politics starts looking very weird. No longer just concerned with gross categories like race, gender, sexuality and the like, the apparatuses of state capture have gone cellular and the biological type caesuras that race once ensured can be refined into other areas.

31 > The continuance within the biological continuum of the human race of races, the distinction among races, the hierarchy of races, the fact that certain races are described as good and others, in contrast are described as inferior: all this is a way of fragmenting the field of the biological that power controls. It is a way of separating out the groups that exist within a population. It is, in short, a way of establishing a biological type caesura within a population that appears to be a biological domain. (Foucault, 1996: 255)

32 Race has been so tied up with visual imaging, colour, facial features, yet biometric systems don't actually profile in the way that the cop on the beat does. While an eugenic dimension is clearly imaginable through the use of these technologies, at present the algorithms are merely concerned with making positive matches based on whether someone has adhered to correct procedures, whether they are in the right place at the right time. Databases operate procedurally to read an "identity" – these continually emergent identities cohere at thresholds and then dissolve back into the datamass – a constant flow of multidimensional affects and codes that connects bodies to institutions and other bodies. The fluidity of identity has moved beyond issues of post-colonial hybridity and queer play. Identity is now so fluid as to be formless. Any form of identity is necessarily regulatory on one level; one set of attributes are recognized and privileged, others are excluded. Identity is actually quite odd to think about from a network perspective. Identity as term – as something lying one side of a relation, denies the connectedness of the network – it is an island, not a node.

33 Yet in a society of spectacle, there is no way to talk about the world without talking about the visibility of colour and the perceptions of a felt reality of skin. The repetitions and limited codifications around race and representation are well known. The "terror" of seeing men bent in prayer (the mosque shot), the outrage at women (on the street, no less!) in purdah (the multicultural suburb shot). The primary binary of self/other – a feature of code, but not necessarily of life – became a ruthless heuristic for explaining the complex ecologies of the world. Categories of race, gender, religion, sexuality all deconstructed as limiting codifications in a signifying realm, were however not wiped off the map (by either ethnic cleansers in a material way, or by anti-essentialists in a conceptual way). They were repositioned on the map into more patrolled territory.

34

Identity in a biometric world of code is not a psychic belonging – a negotiation over beliefs, rights and power. It is now a data match fractured across multiple programs in n-dimensional space: identity becomes a roaming oscillation, looking for a pattern match in a machine. In a world of constant movement where global migrations and mass media have troubled the once easy attribution of race with otherness, regulative technologies move beyond the skin, and code life as such: everyone is captured in this net. But this doesn't mean "racism" goes away, in many ways biometrics just allows one to drill down further into the database and triangulate race with spatial and temporal co-ordinates. In other words, in a multicultural world, biometrics can put race back in its place.

35 Guillermo Gomez-Pena recently recounted in the aviopolis weblog a story about his "evil twin" who exists in the US Customs and Immigration databases. Despite having a measure of fame in Mexico, despite being known publicly, despite being a US citizen, his evil twin in the database invalidates the body of Gomez-Pena each time he enters the US:

36 > From that day on, every time I leave or return to the US, I have to go through the same ritual of mistaken identity: There is this other self I carry along, a ghost with my exact same name, allegedly a drug dealer and we are condemned to travel together; to carry our identities on each other's shoulders; to bear with each other's fate, and whatever he does, knock on wood, will reflect on my official identity. It's like performing in an episode of the Chicano twilight zone. (Gomez-Pena, 2003)

37 An encrypted biometric in his passport may help Gomez-Pena give his evil twin the slip. But the punch line of the story adds another layer to the complexity of relations between bodies and databases:

38 > When I started telling my story to other Latinos, I discovered I wasn't the only one with an evil twin. Several artists from Mexico have had their visas denied under a similar allegation. If fact my experience is so common, that I'm beginning to wonder if it isn't a new conceptual strategy of the Homeland Security Office to add yet another immigration filter to their already thick process? An immigration lawyer friend of mine believes that the problem may be much less sophisticated: their newly consolidated mega-computer system is probably cross-referencing too much unnecessary data or perhaps even the wrong one. (Gomez-Pena, 2003)

39 In some strange way although the body (and its ability to move) is what seems most at stake in the threshold moment when access is either allowed or denied, it is at these moments when the body and thought about embodiment seems most irrelevant to the abstraction of the biometric. When identity is matched, the body is always out of position, so to speak. It is freeze framed. The variations – the various "shimmerings" of a body – are reprogrammed into an algorithm. Thus unique aspects of life are now a selected assignation of variables, numerically represented and available for all kinds of substitutions into all kinds of areas. Life is now available to the database. A potential across a series of networked ecologies.

Bio–metrics–technics–politics

40 Biometrics is part of traffic management. And traffic management is part of security and security is part of service. The increasingly transient nature of everyday life smudges the stability of disciplinary regimes into logistical micro-managing and with it those specifically biopolitical mechanisms of forecasts and statistical elements, of risk management and regulation. Biometrics is yet another way in which the flows of life are increasingly captured and reassembled through stop technologies, which increasingly don't work though "signification" but instantiate us straight into informational sequences.

41 Biometrics is concerned with keeping people in or out: of buildings; of websites; of countries. It is a method of controlling the chaos of movement, of protecting capital from contagion – the harmful touch of an unauthorized ingress – and streamlining the flow for those with the right password. Life as process weaves across many ontological consistencies and reproduces in multiple modes. Connected across time and space through different modes of symbiosis and contagion, the borders between life forms shift and evolve. In a world of transit, movement becomes highly regulated by networks in which public and private are almost indistinguishable, in which individual and mass cohere through statistically rendering singularities.

42 A series of incompossibilities emerge within the evolution of digitised and cross-platform biometrics: movement occurs through capture; sight occurs without vision; individuals are divided

within themselves. If something that is incompossible not only exists but also operates in the world, then either something is up with our theory of reality or the logic of the world is changing. Either way new relations are made visible by the emergence of new control techniques that give some insight into the issues of power in a networked world.

43 Navigating the mutant geometries of modern life invokes a strange sensuality, captured and thoughtless, free while anonymous, neither here nor there, telematic and fractal. As we pass through the thresholds of networked life, we become an organism of that ecology: a potential that could go anywhere controlled through the regulatory techniques of probabilisation.

Author's Biography

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Acknowledgments

Thanks to Ross Harley and Anna Munster for critical insights that greatly assisted the development of this paper.

Notes

[1] Just one little detail Brian Massumi was the first to draw my attention to this critical detail in control access systems. In the same paper he continues: 'Now you're checked in passing, and instead of being judged innocent or guilty you're registered as liquid. The process is largely automatic, and it doesn't really matter what you think or who you are deep down. Machines do the detecting and the "judging"' (2002b: 229).

[back]

[2] 'Scan 'em and then Ban 'em', wired.com, August (2003) outlines how around 150,000 asylum seekers in Britain have been issued with biometrically encoded identity cards through which they can be tracked through the asylum system.

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[3] The story of the Florida biometric trial is outlined in Lisa Bowman, zdnet.com.au, (2003).

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[4] As Massumi has noted: '[T]he grid was conceived as an oppositional framework of culturally constructed significations: male versus female, black versus white, gay versus straight. A body corresponded to a 'site' on the grid defined by an overlapping of one term from each pair' (Massumi, 2002a: 2).

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The Fibreculture Journal (ISSN 1449-1443) — Issue 1, 2003-11-03. This article is published under CC BY-NC-ND. The author retains copyright.

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