Transparency and Sovereignty in Contact-tracing Networks

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Abstract

Threaded through Jean Baudrillard's writings on society, politics, and technology is the notion of transparency. Transparency features in several works critiquing the digital era: by rendering everything overexposed and proximate, media technology has facilitated a frictionless or, using Baudrillard's term, ecstatic flow of information. As transparency aligns itself semantically with frictionlessness and ecstasy, the question concerning the preconditions of transparency becomes pertinent. By advancing a reading of Singapore's TraceTogether application, this article proposes that embedded within Baudrillard's notion of transparency is the paradigm of friction: sovereignty. The TraceTogether team purports a non-invasive and privacy-preserving contact-tracing protocol. Circumventing the use of geo-location tracking, TraceTogether formulates a network of infected bodies based on proximity data by using Bluetooth Relative Signal Strength Indicator (RSSI) readings between devices with the application installed. The reduction of all markers of identification and differentiation—or, points of friction—into the same frictionless code belies an imperative invocation of sovereignty. Drawing on a range of thought that obliquely confronts the question of sovereignty and friction, this article frames the inquiry within the parameters of Jean Baudrillard and other theorists whose deliberations on infrastructure like architecture and networks are wrought upon the concept of transparency. The sovereign power to suspend or collapse the friction/frictionless binary calls into question the right to retain one's friction in this frictionless digital era. This article proposes a critical reading of topological transparency with a view to the political and bio-philosophical implications of what is at stake in proximity-tracing technologies.

Keywords

transparency, sovereignty, privacy, TraceTogether, contact-tracing

Mapping Life: Contact-tracing and Proximity-tracing

Transparency, in Baudrillard's writings, is framed as a symptom of a hyper-liberated world. The notion of transparency hinges upon the mechanics of hyper-prophylaxis wherein the social, somatic, or cerebral body purges itself of any form of difference. Transparency remains a germane concept in the networked and informationalized social system we continue to inhabit today. The concept has been invoked to address neoliberalism in the era of integral reality (Rubenstein; Gane). However, the ways in which transparency has been mobilised continue to be in the register of seamlessness and frictionlessness, whose only mode of interruption comes in the spectre of evil or virulence which still operates along the same logic of the frictionless. This paper presents an overlooked mode of interruption on which Baudrillard's transparency depends: the friction of sovereign power. Transparent transactions and circulations belie a sense of friction that is implied in Baudrillard's own vocabulary when describing transparency. Terms like "extirpating" (*The Intelligence of Evil* 146) and "enforced visibility" (*The Intelligence of Evil* 94) used to describe the mechanisms of transparency remind us that the term is inextricably bound up with and depends on forceful execution.

Concerned with the ways in which transparency engenders and results in purification of difference, Baudrillard's sociological theory of technology confers an urgency to reading digital contact tracing against the backdrop of the recent epidemiological crisis. Momentum in research on the use of mobile phones to trace communicable diseases picked up in the last decade (Farrahi et al.; Yoneki et al.). These approaches, however, still regarded geolocation as a precondition of contact tracing. When Singapore implemented the Bluetooth-based

proximity-tracing system during the SARS-CoV-2 pandemic, the question of demographic topology became pertinent. As a technology that maps proximity rather than geolocation, the TraceTogether application utilizes Bluetooth technology to measure the Received Signal Strength Indicator (RSSI) reading between mobile devices. Using the recent pandemic as the milieu within which a new urban topology takes shape, this paper visualizes the operations of contact-tracing based on proximity data and delineates the implications of proximity-tracing technologies on the co-implicated concepts of transparency, sovereignty, and privacy.

Friction and Transparency

Baudrillard's catapult to fame in the late-twentieth century occurred amongst other critical thinkers offering ways to account for morphological changes of the time. The concern with locating and mapping the individual within urban structures came to occupy the writings belonging to this tradition. One of the symptoms accompanying modernity, Walter Benjamin intimates, is the training of the human sensorium according to the rules of a growing urban landscape (175). The individual thus find themselves under the imperative of an urban syntax facilitated by technological signals, both optic and haptic.

Picking up on the shift from *flâneur* to pedestrian, Frederic Jameson's ecology of the shopping mall and hyperspace of the Bonaventure Hotel explore the implications of this topological shift in the interpretation of urban structures ("Postmodernism and Consumer Society" 14; "Future City" 71). Within these postmodern spaces, the individual not only acquires an urban literacy by which their sensoria become attuned to traffic lights, screens, and other pedestrians, he also develops new organs to navigate *the* urban structure: the multi-storied building. The problematics of locating the body and tracing its movements within these urban structures necessitate a reconfiguration of how bodies can be organized and mapped.

The paradigmatic shift from the cartographic map to the reticulated network is one accompanied by the uptake of digital technologies. As ethnology and tourism gridded the world and extirpated it of otherness in the nineteenth century, the rise of digital technologies saw a radical acceleration of this movement. The topology of the network occupied the technological imaginary from the late-twentieth century onwards. Vocabulary like "reticulated" society (Stiegler 37) mark a shift towards the re-conceptualization of the population as network. The genealogy of demographic topology appears to follow the trajectory of increasing frictionlessness: while modern human finds friction all around the urban structures which compel them to *react* to their stimuli, the node in the network faces no such friction. Rather, it moves adaptively within a mutative reticulum at the level of reflexivity and automaticity. Accordingly, reticulation, for Stiegler, conjures the phenomenon of automation: if the manual relies on the friction of the corporeal, then the *auto*matic involves rendering frictionless of the self [*autos*]. Using knowledge as shock as an example, Stiegler warns that the impetus of the data economy in information circulations threatens to render us stupid, which always proceeds from automaticity (25).

Beyond the concern of reversing this epistemological predicament, Baudrillard offers the adjective "ecstatic," rather than "stupid," to describe this transparent circulation. From the Greek ἐκ- which means "out" and ἱστάναι "to place," ecstasy holds within its etymological roots the sense of an extrusion of the self who is not tied down to place. The ecstasy of circulation, then, refers to a frictionless flow within reticulated society: it conjures the image of pure circulation without referent to material conditions of urban life. Where "stupid" implies a semantic valuation, "ecstatic" emphasizes the relation that structures the self and its mode of circulation. Ecstasy as a conceit for transparent circulation is picked up by Baudrillard in his

take on the same architecture that occupied Jameson's critique of postmodern society. The Bonaventure Hotel has "[no] interior/exterior interface. The glass facades merely reflect the environment, sending back its own image….Everywhere the transparency of interfaces ends in internal refraction" (Baudrillard, *America* 59). The glass architecture blends into the urban landscape by disappearing into its own reflection. Reflection and refraction both involve a game of interfaces and reduplication (of their own images) so that the friction of difference or otherness has no place in this ecstatic circulation.

In its immediate impression, transparency implicates a sense of pure frictionlessness and unresisting flows within short-circuits. However, mobilising Baudrillard's famous analogy of a biological form of transparency, the total(izing) immunity of asepsis summons the image of a techno-pharmaco sovereign: the militaristic parlance of bio-medicine—defence, protection, and prophylaxis—mobilizes immunity as a problem of boundary maintenance. Undergirding absolute asepsis lies the sovereign technique of instrumentalizing borders, which forms the basis on which the immune system operates as sole arbiter of boundaries— inside/outside, self/other, and friend/enemy. The values on the left of the solidus need to be secured from the relentless threat embodied by the other side of the divide: an incursion of which could result in disease, infection, and contagion. Hence, even as transparency delineates the frictionless—and safe—circulation within and of the self, as the image the Bubble Boy presents, the force behind this techno-pharmacological imaginary reminds us of sovereign power and its concern with ceaselessly maintaining territories and boundaries. To draw and maintain boundaries, as Foucault has argued, is precisely the prerogative of the sovereign to "make war on his enemies" (*Discipline and Punish* 48). If the introduction of difference—

other/enemy/pathogen—is the originary power of the sovereign, then the reverse—the purification of difference—must still belong to this order.

Baudrillard's notion of transparency brings the seemingly disparate terms of reference into a chimerical formulation: as a kind of frictionless sovereignty, especially in the sense Ryan Bishop (2020) mobilizes, the operations of reticulated society needs must operate as an aporia. Even as the urban network of labour, capital, and services flow along frictionless lines of circulation, these frictionless movements are contingent on a sovereign call for the lifting—and administration—of friction. As Bishop observes, frictionless sovereignty:

> is oxymoronical because sovereignty requires some sort of resistance—some force or other, some state or territorial challenge, some excess or breach—which would serve as a challenge to legitimize the authority and necessity of that sovereignty while thus proving its authority through its triumph over resistance. The formulation of frictionless sovereignty is redundant because the notion of the sovereign is that which operates self-evidently within its domain, that which can enact its will with impunity. (n.p.)

Bishop's exposition of the term "frictionless sovereignty" amounts to a negotiation of the contiguity between Foucault's sovereignty and Baudrillard's transparency. Even as the two writers embark on sharply differing theoretical projects, the tensions between Foucault and Baudrillard are reconciled apropos of the relationship between friction and frictionlessness.

Taking as a starting point the shift in modes of governance from the seventeenth century onwards, Foucault suggests in several writings and lectures that sovereign power—to "let live" and "make die"—comes to be informed by its inverse. What is striking in Foucault's delineation of sovereignty is the effect it has on the subject: the subject before sovereign power is "neither dead nor alive" because it is by virtue of said power that the neutral state of the

subject can either live or die ("Society Must be Defended" 240). Reading Hegel through Nietzsche, Baudrillard similarly contends that this unilateral granting of life—or, in other words, debt—constitutes the basis of sovereign power (*Symbolic Exchange and Death* 61). The state of suspension that gives rise to the neutral or indebted subject is coextensive with the "sudden, violent, discontinuous" form in which sovereignty is necessarily exercised (Foucault, *Discipline and Punish* 208). Sovereignty, thus, suspends the binary of either/or—either dead or living after the sovereign decision—insofar as it can, with impunity, implement the collapsing of the binary.

As Bishop's "frictionless sovereignty" suggests, sovereignty necessarily involves the invocation of resistance or friction, as with the declaration of a state of emergency or the unilateral implementation of digital surveillance in the name of a bio-security threat. However, sovereignty also embodies frictionless discretion to circulate within a given—not always territorial—domain. Undergirding the frictionless suspension of the friction/frictionless binary is, concomitantly, the absolute friction of sovereign power. When Baudrillard writes about transparency, he draws upon the aporetic conditions on which frictionless circulations are contingent. In what he calls the "différance of death," by which the slave is condemned to a "slow death" by labor, Baudrillard postulates that frictionless exchange in consumer society operates, in Hegelian terms, according to the master's dialectic (*Symbolic Exchange and Death* 61-62). Only with an irruptive and violent death—the reintroduction of the stakes of life and death of the slave/laborer—can the inexorable circulation of labor, wage, and consumption be interrupted. Thus, even as Baudrillard emphasises the frictionless part of the dyad in his writings on transparency, it becomes clear that the friction of sovereign power is taken to be the *sine qua non* of the former. The purification of the specter of difference and the ecstasy of

being in frictionless circulation, underwritten by the promise of transparency, hinges upon this

understanding of sovereignty.

Topological Transparency

   a. Geolocation vs Proximity

Against this theoretical backdrop, Baudrillard takes as his starting point the transparent

topology that characterizes contemporary societies. Transparency presupposes a network of

circulation with minimal referent to the material urban structures: irreducible to either the

flâneur or the pedestrian, Baudrillard's schizophrenic individual (im)materializes, in an

apposite image, as a fractal token by proximity-tracing technologies.

Key to Baudrillard's notion of transparency is not so much the denotation of having

information laid bare to state apparatuses; rather, it entails the reduction of information to a

common code all the better to facilitate frictionless circulation. Even as private and personal

information are encrypted, this reduction of life to code renders *inter alia* our behaviors,

thoughts, desires, and movements transparent. In the case of TraceTogether, users of the

application are delivered over to a topological form of transparency where identifiable

information becomes plateau-ed into frictionless and temporally-marked virtual tokens. The

implementation of a pioneering technology for contact tracing reinvests historical cogency in

Baudrillard's notion of transparency. Through a reading of TraceTogether's operations, this

section demonstrates how the friction of sovereignty operates as a precondition of frictionless

transparency.

Proximity-tracing re-conceptualises the urban syntax by cleaving surveillance from

geolocation. Indeed, the claim to privacy in TraceTogether's white paper emphasizes the

collection of proximity data without the need for geolocation surveillance (Bay). Proximity

tracing as a form of surveillance belongs not so much to the panoptic order as it does to the protocological domain: it is less interested in disciplinary intervention—in breaking up useless or bad circulations—than it is in suspending or deferring friction. TraceTogether's vision for society aligns more closely with Baudrillard's than Foucault's transparency: while the latter dreams of a hypervisible society with panoptic surveillance, the former offers orgiastic circulations mediated by technological protocols. The subject before sovereign power—neither dead nor alive—emerges as the same subject in TraceTogether's transparent network, with the stakes less of life/death and more of friction/frictionlessness with permutations in social, economic, and physical circulation.
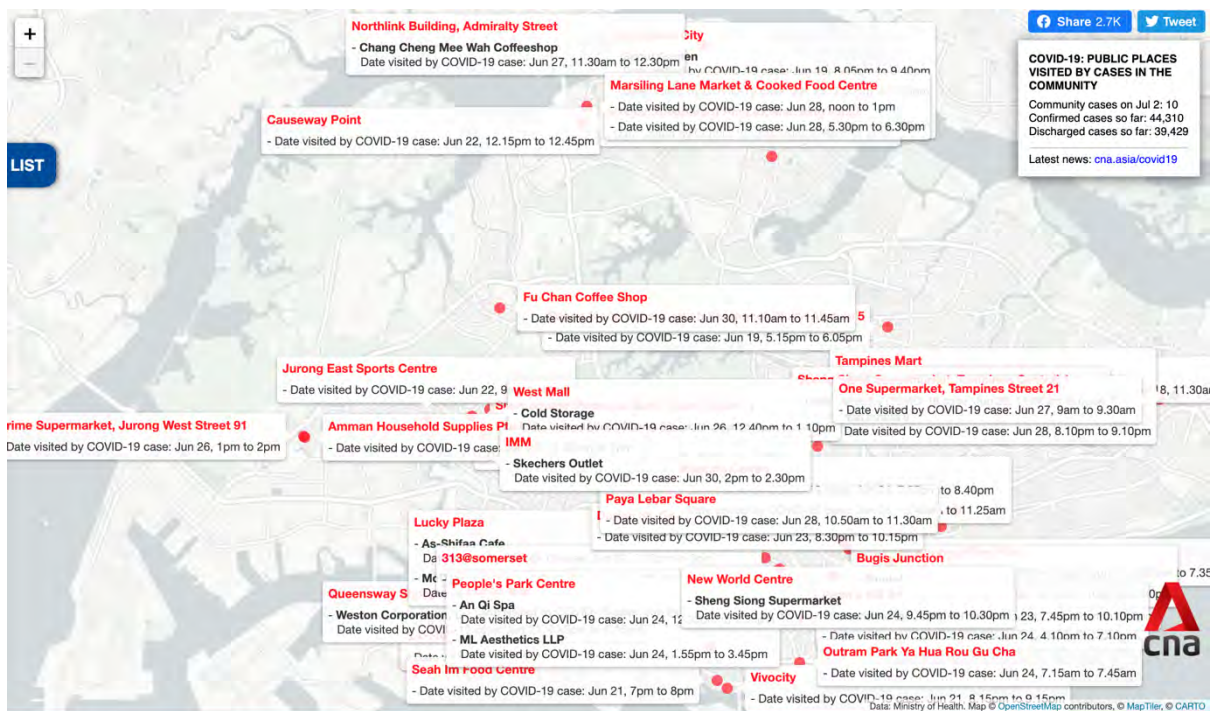

Fig. 1. Screenshot of interactive Singapore Map with list of public places visited by COVID-19 cases in the community by Channel News Asia (CNA), https://infographics.channelnewsasia.com/covid-19/singapore-map-places-visited-by-community-cases.html?cid=cna-main-covid19-places-visited_desktop-banner_17062020_cna. Accessed 5 July 2020. The cartographic map has since been replaced by a tree diagram of sporadic clusters in the local community. Courtesy of the author.

TraceTogether's proximity-tracing technology reshapes the topological imaginary of what is brought to bear on contact tracing and, by extension, mappability, surveillance, and privacy. Tracing the movements and interactions of bodies within the framework of transparency revolves around the question of *topos*. Traditional contact-tracing methods involve reporting the locations which the infected have visited. The epidemiological topography of the map is grounded in the physical and architectural sense of *topos*.
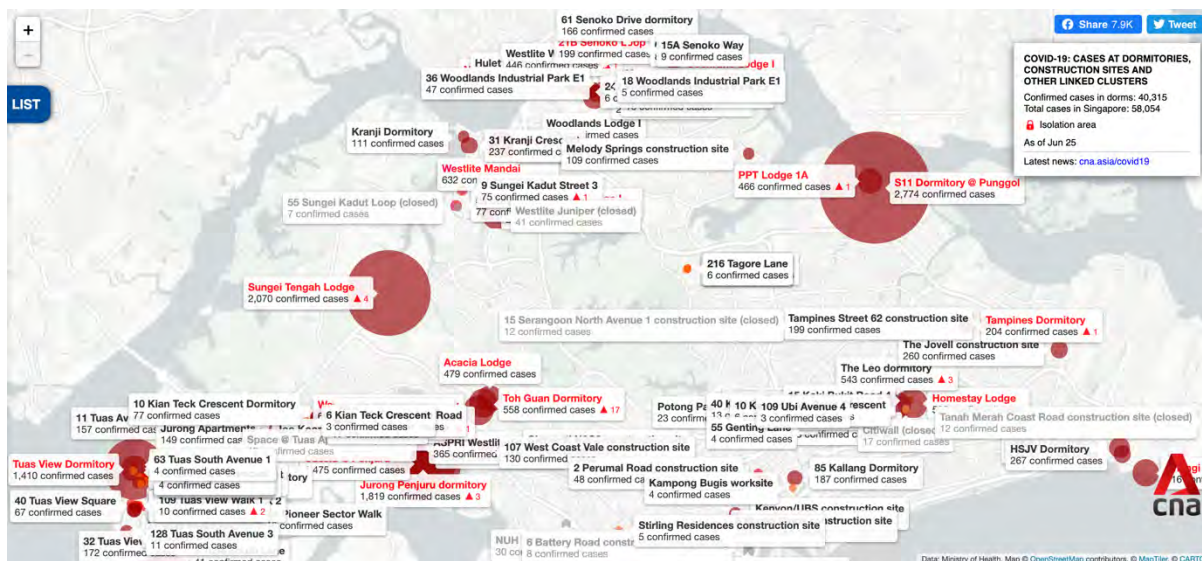

Fig. 2. Screenshot of interactive Singapore Map with list of cases at foreign worker dormitories and construction sites by Channel News Asia (CNA), https://infographics.channelnewsasia.com/covid-19/singapore-map.html?cid=covid19-main-singaporemap_desktop-banner_15042020_cna. Accessed 8 November 2020. Last updated by CNA on 25th July 2020 upon the steady decline of cases in foreign worker dormitories. Courtesy of the author.

One of the earlier records for tracing the spread of COVID-19 came in the form of COVID maps. These maps (Fig. 1) illustrated the public places where COVID cases were reported, replete with respective time and dates. During a "circuit breaker" period, it became clear that a separate cartographic map (Fig. 2), detailing the cases found in foreign worker dormitories, was required to account for the scale of the outbreak clusters. In an implosion of

viral short-circuits, the Potemkin dormitories unveiled the extensive farce maintained under

"normal" times. These areas of topological friction serve as a testament to the way in which the

dream of a thoroughly transparent society cannot be realized insofar as Singapore persists in

shoring up the narrative of frictionless mobility while overlooking the bodies who contribute to

the nation's transparent infrastructure.

While cartographic representations of the pandemic have been instrumental in

visualizing hot spots in the early stages of the pandemic, the TraceTogether team recognizes

the need to supplement the cartographic method with digital contact tracing. Given the general

suspicion surrounding surveillance apparatuses, TraceTogether opted for proximity- rather than

geolocation tracing. The normalized order that public landmarks bring—not least, shopping

malls, places of worship, and amusement parks—is destabilized by the SARS-CoV-2

emergency: public spaces where people congregate, interact and circulate become the very

hotspots for contagion. Architecture, which served up geolocation information with totalising

clarity, became blackboxes for epidemiological crises. Within the urban architectural terrain,

time-based contact points between people become impossible to trace based on geolocation

data. The building as *the* urban structure required a technology that can account for its syntax.

b. "Who" vs. "Where"

Where geolocation constituted the first way of mapping COVID cases, the introduction of

proximity tracing (Apple; Bay) provides a novel way to organize the infection topology.

Eschewing geolocation tagging as an option for contact tracing during the epidemiological

crisis, TraceTogether boasts of its ability to preserve the user's privacy and overcome issues of

accuracy within urban structures. One of the anticipated Frequently Asked Questions on the

TraceTogether website goes: "Can TraceTogether track the location of all phones installed

with the TraceTogether App?" To this justifiably paranoid question, TraceTogether responds

with the assurance that the application does not "collect or use physical location data (e.g.

GPS, WiFi fingerprinting, cell ID)"; it only records proximity data via BlueTooth technology.

In other words, TraceTogether identifies the "*who*" rather than the "*where*" (TraceTogether
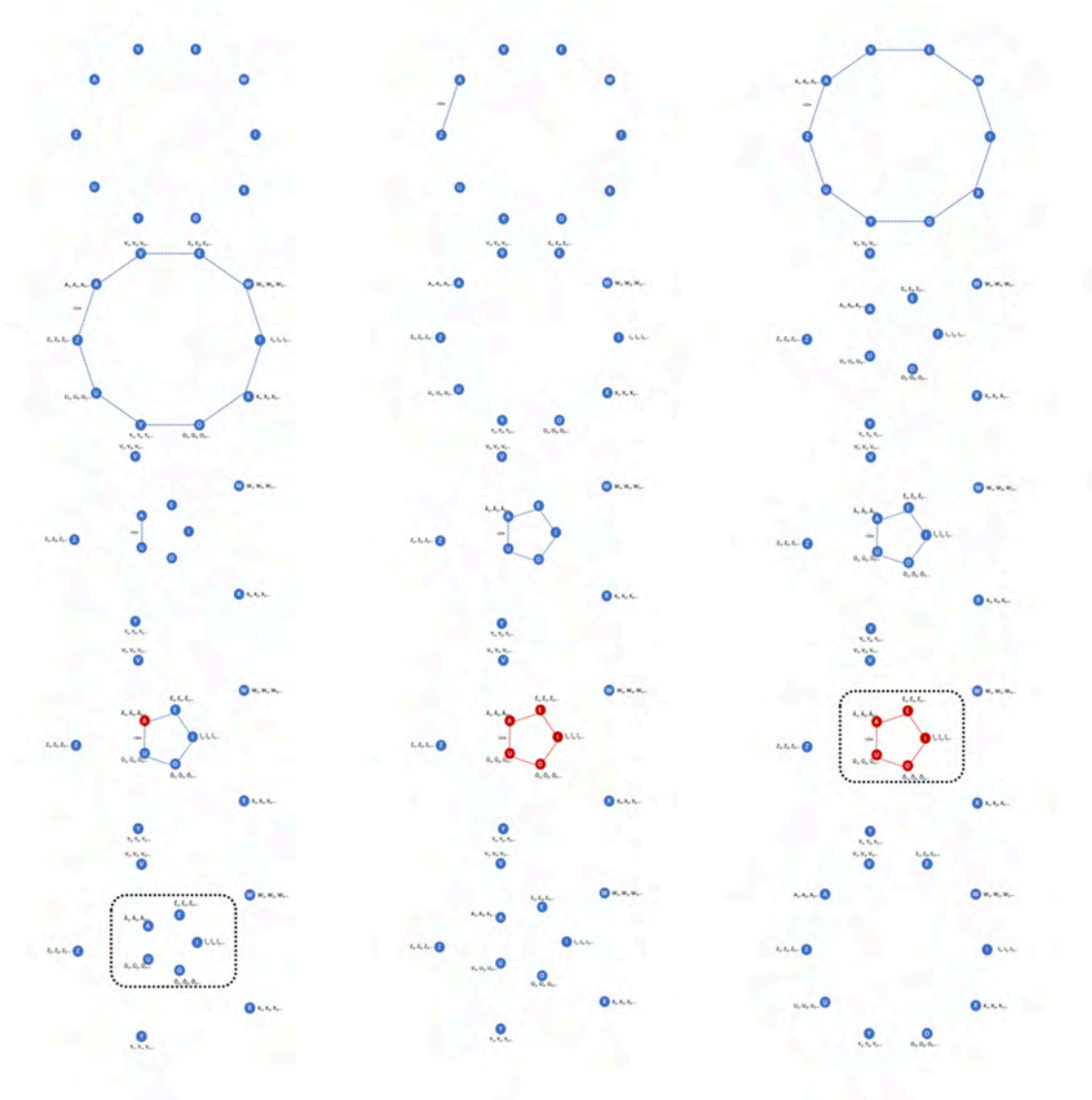
2020).

Fig. 3. Visualizing the Proximity-tracing Network by TraceTogether (left to right). Each individual is represented by a letter-node with tokens emitted at regular time-based intervals. When individuals *A, E, I, O,* and *U* get into a proximity of less than two meters, the tokens emitted are marked with a circumflex. If A gets tested positive for the virus, the app flags *E* and *U* who have been in close proximity with A. If E and U also test positive, I and O are subsequently flagged. Adaptive quarantine is implemented only on these five individuals even if *V, W, X, Y,* and *Z* were in the same building, floor, or shop. Visualization available in video format at https://vimeo.com/546033271. Stills and video courtesy of the author.

The "*who*" that registers for the app using their National Registration Identification Card (NRIC) number[1]—which can reveal personal information like one's name, age, date of birth, residence, and, less directly, one's passport number, mobile number, email address, driving license, and any other administration and transactions that pass through the Singapore government—finds their digital double suspended and fractalized into temporal tokens unless an epidemiological event occurs in the form of a transmission or an outbreak. The topological "failure"—or, the friction—of the map in contact-tracing is thus overcome with proximity-tracing, which is touted as a "privacy-preserving" protocol that need not rely on geolocation or identifiable data in order for it to operate. Using Bluetooth technology, proximity-tracing apps like TraceTogether emit temporal tokens for each user's device. Following the idea that networks are capable of capturing time-based interactions and intervals in its topological structure, this paper provides a hypothetical visualization for the operations of proximity-tracing as described in the TraceTogether white paper. Without reference to geolocation markers exemplified by the map, the nodes in the network are reified by temporal (A_1, A_2, A_3) and proximity tokens ($\hat{A}_1$, $\hat{A}_2$, $\hat{A}_3$).

The topology of proximity-tracing networks, without corresponding to an architectural referent, concerns the organisation and arrangement of nodes within the network *topos*. Proximity-tracing re-organizes the urban architecture and re-writes its syntax insofar as the network that arises from this landscape is no longer met with the friction of "opacity and inertia" associated with the individual (Baudrillard, *Simulacra and Simulation* 66). Concerned more with the "who" than the "where," TraceTogether's technological imaginary envisions a network of transparent circulation where opaque difference is reconfigured into virtual tokens and privacy is putatively maintained (TraceTogether 2020). Markers of reality like identity and geolocation,

which are irreducible sources of difference and differentiation, have no place in the dream of a

transparent world: difference can be eradicated when these markers become relegated to the pure

and frictionless relation of proximity.

The visualisation of proximity tracing in Figure 3 encapsulates this aspect of transparency

but it also problematizes the frictionless claims purported by TraceTogether. The frictionless can

only (de)materialize under the imperative of sovereignty. Sovereignty leaches into the fantasy of

transparency at two levels: first, as a precondition of transparency and second, in the suspension

or collapsing of the friction/frictionless binary. The frictionless mobility of individuals belie the

sovereign imperative to download the TraceTogether application or collect a TraceTogether

token—in other words, to mark oneself temporally (A_1, A_2, A_3) and proximately ($\hat{A}_1$, $\hat{A}_2$, $\hat{A}_3$).

That the use of TraceTogether in public venues will not be mandatory until the uptake rate

reaches a certain threshold brings nothing to bear on the way transparency operates as and

depends on a kind of mandate itself (Wong). The "option" of using TraceTogether becomes

Hobson's choice: citizens face no penalty for not using the TraceTogether app or token and,

under a Deleuzian mode of control, have the freedom to move about without fear of punitive

action from the state. However, the other side of the control mechanism—rather than

punishment—entails being disbarred from places which require the TraceTogether app or token.

The entire premise of TraceTogether as a form of technological control consists precisely of the

toggling between the frictionless freedom to go about one's business and the friction of

responding to the state's summons in the case of an epidemiological event. Prioritising fluidity,

efficiency, and iterability—all characteristics TraceTogether operations embody—transparency

is invoked by and, in turn, invokes sovereignty over the topological relations of proximity.

Indeed, transparency precisely presupposes this sovereign toggling between antipodes of friction and frictionlessness. The free-floating individuals in the TraceTogether visualisation only find their proximate relations with the sovereign invocation of a *line*, however virtual. As Cornelia Vismann (2013) propounds in her exposition of cultural techniques, the line—an archaic *Kulturtechniken*—operates as a sovereign technology which demarcates one's territory: "the *Imperium Romanum* is the result of drawing a line" (84). Pushing Vismann's insight on the connection between line-drawing and sovereignty further, the TraceTogether visualisation advances a critique of the co-implicated notions of friction, sovereignty, and transparency. The line in the visualisation belongs not so much to the order of territorial sovereignty but rather the realm of techno-political tracing. In the epidemiological measure of contact tracing, tracing necessarily involves producing and reifying relations that might otherwise remain abstract. In the proximity tracing visualisation, however, the tracing that occurs positions the virtual lines of connectivity as an imperative: the abstract becomes the source of sovereign intervention. As the dotted lines virtually connecting individuals are ceaselessly and iteratively drawn and re-drawn, friction is also discretionally suspended and implemented.

The tyranny of geolocation is no more—or is it? On the one hand, proximity tracing does away with using absolute location as a way to identify individuals for quarantine. In its place, the relative position of individuals while following the "rules" of the infrastructure—its walls, entrances, corridors, and storeys—is taken to be the measurement of infectivity. On the other hand, proximity tracing's fantasy of a transparent society not only hinges upon the friction of sovereign power which (en)codes sovereignty into the praxis of transparent and frictionless circulation, it also re-introduces a new topology of geolocation landmarks. Perhaps a less literal rendition of the military tactic of "walking through walls" (Weizman 199), proximity-tracing's

interpretations of the urban landscape remain startling similar: the building is not a homogenous

structure taken to be as a totalising landmark on the map but one that is made up of its own
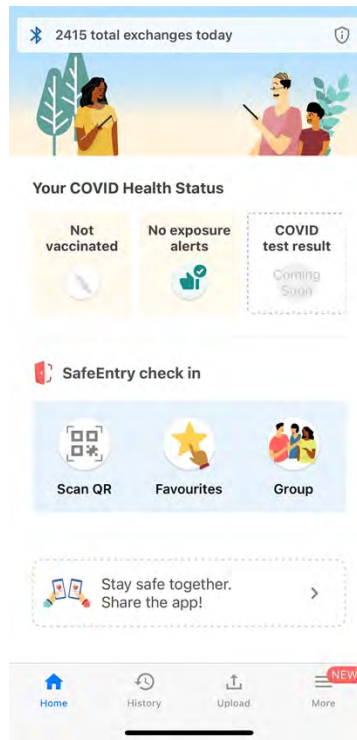
internal syntax.

Fig. 4. Screenshot of homepage interface on author's TraceTogether application (Version 2.7). Accessed 7 May 2021. Courtesy of the author.

The SafeEntry system implemented one month after the government rolled out the

TraceTogether app confirms the aporetic operations of topological transparency. The SafeEntry

system set up at all points of ingress and egress operate as checkpoints whose passage have

become the sites of friction: the people who enter and exit these infrastructural media are none

other than sovereign bodies who are afforded the freedom to circulate. In a paradoxical

formulation which captures the kernel of transparency, only when sovereignty is invoked can

friction be lifted and transparency thereby achieved; at the same time, however, these frictionless

bodies, in an involution, also become carriers of sovereignty in their very transparency. Striking

is the added feature[2] on the TraceTogether app in Figure 4: on top of its original function to trace

Bluetooth proximity signals, the application now offers the function of scanning QR codes at

SafeEntry checkpoints. The proximity of these two teleologically differing features—proximity-

tracing and checkpoint tracking—serves a testament to the troubled imaginary propounded by

topological transparency: the weaving of friction into frictionless circulations. What, then, does

this reading of transparency bring to bear on the proverbial conundrum of privacy and security?

Privacy in a Transparent World

TraceTogether's design to protect the users' privacy ineluctably alters the way we understand

and experience the concept: the narrative of privacy maintained by the developers of proximity-

tracing applications falls into the realm of simulation wherein the overexposed city replete with

surveillance apparatuses attempts to demarcate loci for the retention of the friction of the private

and personal. That the irony of a technology which envisions a transparent world also promises

the preservation of privacy should not be lost on us. Especially with tracking technologies like

TraceTogether, the question of privacy in light of digital surveillance needs to be reframed in

terms of friction/frictionless rather than of privacy/security. Indeed, in recent critiques of big data

and surveillance, the concern becomes less of negotiating between privacy and security and more

of the position one can take apropos of digital surveillance apparatuses.

In the age of algorithmic governmentality, data-collecting apparatuses call upon the

individual to account for themselves rather than the other way around (Rouvroy 145). Victims of

these apparatuses are held to a "far higher standard of evidence" than the technological

apparatuses that track them (O'Neil 10). Accordingly, one's relationship vis-à-vis one's digital

subject becomes a matter of politics: the ability to deviate from one's virtual avatar or to refuse

the turning of everything into a potential data point becomes increasingly bound up with the

technics of claiming and maintaining distance between oneself and one's digital subject

(Goriunova 130). Indeed, Deborah Lupton's (2016) critique of self-surveillance devices reminds

us that the body as the irreducible resource of data is also the source of risk and unpredictability.

The collapse of the ethos of "self-care" into civic duty, as Lupton observes, emerges from the

neoliberal imperative of self-governance (111). Whether the nostrum of algorithmic

governmentality comes from philosophy—going back to Agamben's "form-of-life" or looking

towards Stiegler's care [*panser*]—or from sociological critiques interrogating the ways in which

subjectivity can be retained apropos of digital surveillance, the choice of opting out of the

increasingly technologized globalscape dwindles. Implicit in the corpus of contemporary media

theory, which Baudrillard pioneered and within which he remains pertinent, is the sense that

these technological apparatuses are here to stay: the acknowledgement of the permanence of

digital surveillance indicates that a shift in framing the problem of privacy and surveillance is

needed.

Transparency renders privacy epiphenomenal in this era, not so much as the result of

increasingly invasive surveillance technologies but because the discourse surrounding these

technologies mark a point in time when the concept of privacy loses its historical purchase. At

the "height of obscenity" (Baudrillard, *The Intelligence of Evil* 187), the recurring vocabulary

concerning privacy in contact-tracing narratives is an unsurprising symptom of the disappearance

of privacy. If the private, following the parlance of the TraceTogether white paper (2020), is that

which marks or identifies the individual, then to render society transparent from the

epidemiological perspective of proximity tracing involves removing all identifiers that reflect

any kind of material truth. It is precisely the reduction of personal information to this common,

frictionless code—temporal tokens or TempIDs—that renders possible the endless, fractal

reproduction of "us," or at least our proximal relations, in real time. The gambit involved in

staking a claim on privacy with security apparatuses like TraceTogether renegotiates the old

problem of privacy versus security and a newer problem concerning the explosion of non-

"personally identifiable information" (Bay 1).

The question concerning the right to retain or invoke one's own friction—to opt out of

this frictionless circulation by maintaining the discreteness of personal information—becomes

increasingly urgent. Neither a *flâneur* nor the pedestrian, the TraceTogether user diffracted into

mitotic tokens materialize as isomorphic "I"s without reference to any material reality.

Concomitantly, if in each fractal, the whole organism's information is contained, then the tokens

which are touted to protect the user's privacy by adding layers of anonymity do nothing more

than reproduce these very information to the nth-power. The fate of privacy in a transparent

world entails its diffraction into multiple bits of privacy-protecting information: TraceTogether's

preservation of privacy necessitates the replication and amplification of temporal tokens at the

virtual level.

Concomitantly, the exponential growth of digitalized personal information, in turn,

witnesses the amplification of their interceptability: fractal beings multiply the sites of potential

politico-technological intervention. The private can no longer be located on the horizon of

"privacy-preserving" proximity-tracing technologies insofar as this virtual build-up of private

information multiplies itself indefinitely. The private and personal, which serve as points of

friction, also become sites of sovereign intervention: the option to maintain one's opacity or

resist being rendered frictionless dwindles against the backdrop of contagion-related emergencies

and technologies that appeal to the language of the preservation of privacy while overlooking the

politico-ethical questions of agency and resistance.

Indeed, the recourse to proximity-tracing during the SARS-CoV-2 pandemic is

tantamount to the deferral not just of privacy but also of anything that might amount to an event.

The deferral of a biopolitical event in which even the friction of sovereign intervention cannot

alleviate casts a specter of the entropic catastrophe which Stiegler (2016) believes lies ahead of

automatic societies. The transparent world works increasingly hermetically, and as the world

grows smaller via short-circuits as the result of uncritical implementations of technologies under

the hypochondriac declaration of "states of emergencies"—declarations that call for suspension

of everyday life, for justifications for overreaching, and for, as Baudrillard would say,

hyperprophylaxis or, Agamben might say, governing according to worst-case scenarios—the

catastrophe grows progressively in scale. As Collier and Lakoff (2015) have observed on

biopolitics of vital systems, life is not an amalgamation of discrete organisms, but rather

dependent on a complex ecology of critical systems whose disruptions serve more of a danger

than the actual catastrophe itself. The stakes in technologically advanced countries, like the kind

Singapore envisions itself to be—a Smart Nation—shift from mortality to morbidity. In what

they call "a significant mutation in biopolitical modernity" (21), biopolitics from the twentieth

century onwards conceived life as inherently collective and technological (not necessarily

digital). The continued functioning of daily life was just as, if not more, vital and urgent than

mitigating the primary cause of emergency. In Singapore's case, labour was divided into

essential and inessential, with doctors, cleaners, garbage collectors, hawker centre vendors, and

delivery people making the former's list (Straits Times). During the epidemiological circuit

breaker, only essential labourers were permitted to move about for the maintenance and

operations on which quotidian life depended. The biopolitical event, rather than epidemiological,

materialises as administrative instead: the crisis had more to do with managing resources than the

mortality rates of the pandemic (Baker and Mohan).

As TraceTogether solves an administrative and protocological rather than an

epidemiological problem, it comes as no surprise that the biopolitical event can metastasise

across domains of governance. When it was announced that the Singapore Police Force could

obtain TraceTogether data for criminal investigations, the platitudes rehashing the privacy-

preserving ethos of the BlueTrace protocol became the government's recourse (Mohan; Ang and

Abdullah). The slippage from epidemiology to forensics cannot be interpreted as anything but a

calculated fallout of Singapore's biopolitical strategies. Faced with politicians who have no

qualms about admitting to "errors" in legislative disclosures (rather than overreach) and an

increasingly technologized future to keep up with the ever-expanding ballpark of emergencies

and ever-decreasing threshold of tolerance for disruption, Singapore cannot expect to shore these

retrospective interventions against the ramifications of its techno-political strategies and

protocols. Rather than enumerating the spheres in which TraceTogether can be used, the

government's techno-biopolitical strategy seems to be working retroactively to declare non-

exemptions to the reach of the jurisdiction of TraceTogether. When future technologies prove to

make the citizenry even more transparent—more frictionless—one can expect that the friction of

sovereign intervention to come from similar justifications of expediency, urgency, and the

candor of a politician being "blindsided" by the "ingenuity and brilliance" of technology (Choo

2021).

That the fundamental assumption regarding surveillance technologies is that they are

applicable anywhere unless further qualified only feeds into Singapore's vision of a transparent

Smart Nation. As a reminder of Baudrillard's historical cogency, what he terms Integral Reality has, in the name of national emergency, seamlessly percolated from the social to the political, if they could be thought apart in the first place. Integral Reality, for Baudrillard, describes the drive to frustrate anything that might threaten the "great game" of frictionless abstraction and, by extension, the eruption of an event (*The Intelligence of Evil*). Indeed, as Ryan Bishop and John Phillips (2007) reading Baudrillard in the year of his passing write, "the global order is set up with increasing intensity to militate against such chances, against 'the luck of the event'" (138). TraceTogether marks the point of no return in how the social body can be ceaselessly and frictionlessly surveiled while maintaining the promise of privacy.

Without necessarily entailing a technocratic government or a selfish corporation, the dangers of proximity tracing is structural rather than semantic. The event horizon of proximity tracing sets a new precedent for the way in which information can be collected on grounds of forestalling an emergency: in Singapore's "war on COVID," the pre-empted events materialize as a problem of managing resources, whether they be healthcare staff and equipment, financial reserves, or critical supply chains (Ramakrishna). However, in framing the population as modulatory networks of proximities, the cost lies not so much in the negative—the giving up of one's information—but rather in the positive, even additive, harnessing of privacy-protecting information. In line with Baudrillard's (2005) fatalism in his later writings, what ensues is the reduplication of non-personal information indefinitely against a blank backdrop to defer a biopolitical catastrophe A_1, A_2, A_3,…

Notes

[1] Only from Version 2.0 onwards did TraceTogether require ID verification in order to register for the application.

[2] Version 2.1 included an update that embedded a QR scanning feature in the TraceTogether application that allowed the user to "seamlessly check[] in/out to [sic] SafeEntry locations" (TraceTogether 2021).

Works Cited

Agamben, Giorgio. *Means Without End*. University of Minnesota Press, 2000.

"App Release Notes." *TraceTogether,* https://support.tracetogether.gov.sg/hc/en-
sg/articles/360046481013-App-Release-Notes. Accessed 7 May 2021.

Ang, Hwee Min and Zhaki Abdullah. "Police can only ask for TraceTogether data through
person involved in criminal probe." *ChannelNewsAsia*, 5 Jan 2021,
https://www.channelnewsasia.com/news/singapore/tracetogether-data-police-access-
vivian-balakrishnan-parliament-13896684. Accessed 1 May 2021.

"Apple and Google Partner on COVID-19 Contact Tracing Technology." 10 April 2020,
https://www.apple.com/newsroom/2020/04/apple-and-google-partner-on-covid-19-
contact-tracing-technology/. Accessed 1 May 2021.

Baudrillard, Jean. *The Ecstasy of Communication.* Translated by Bernard Schütze and Caroline
Schütze. 1987. MIT Press, 2012.

---. *America*. Translated by Chris Turner. 1988. Verso, 1996.

---. *The Transparency of Evil*. Translated by James Benedict. 1993a. Verso, 2009.

---. *Symbolic Exchange and Death*. Translated by Iain Grant. 1993b. Sage, 2017.

---. *Simulacra and Simulation*. Translated by Sheila Glaser. 1994. University of Michigan
Press, 2006.

---. *The Intelligence of Evil or The Lucidity Pact*. Translated by Chris Turner. Oxford: Berg,

2005.

Bay, Jason, Joel Kek, Alvin Tan, Chai Sheng Hau, Lai Yongquan, Janice Tan, Tang Anh Quy.

"BlueTrace: A privacy-preserving protocol." *Government Technology Agency*, 2020,

https://bluetrace.io/static/bluetrace_whitepaper-

938063656596c104632def383eb33b3c.pdf

Benjamin, Walter. "On Some Motifs in Baudelaire." *Illuminations*. Translated by Harry Zohn,

Schocken Books, 2007, pp. 155-200.

Bishop, Ryan. "Frictionless Sovereignty: An Introduction." *boundary 2*, vol. 5, no. 2, August

2020, http://www.boundary2.org/2020/08/ryan-bishop-frictionless-sovereignty-an-

introduction/. Accessed 1 May 2021.

---, and John Phillips. "Baudrillard and the Evil Genius." *Theory, Culture & Society*, vol. 24,

no. 5, 2007, pp. 135-145.

"Can TraceTogether track the location of all phones installed with TraceTogether?"

TraceTogether, https://support.tracetogether.gov.sg/hc/en-sg/articles/360043224874-

Can-TraceTogether-track-the-location-of-all-phones-installed-with-TraceTogether-.

Accessed 22 July 2020.

Choo, Daryl. "TraceTogether Data Use." *TodayOnline*, 2 February 2021,

https://www.todayonline.com/singapore/tracetogether-data-use-vivian-balakrishnan-

takes-full-responsibility-error-says-it-would. Accessed 5 July 2020.

Collier, Stephen and Andrew Lakoff. "Vital Systems Security." *Theory, Culture, Society,* vol.

32, no. 2, 2015, pp. 19-51.

"Essential v non-essential jobs." *The Straits Times*, 16 June 2020,

    https://www.straitstimes.com/singapore/how-the-survey-was-conducted. Accessed 5

    July 2020.

Farrahi, Katayoun, Rémi Emonet, and Manuel Cebrian. "Epidemic Contact Tracing via

    Communication Traces." *PLoS ONE*, vol. 9, no. 5, 2014, pp. 1-11.

Foucault, Michel. *Discipline and Punish*. Translated by Alan Sheridan. 1977, Vintage Books,

    1995.

---. *"Society Must Be Defended": Lectures at the Collège de France, 1975-1976*. Translated by

    David Macey 1977. Picador, 2003.

Gane, Mike. "The Cultural Logics of Neoliberalism: Baudrillard's Account" *Cultural Politics*,

    vol. 11, no.1, 2015, pp. 1-17.

Goriunova, Olga. "The Digital Subject." *Theory, Culture & Society*, vol. 36, no. 6, 2019,

    pp.125-145.

Jameson, Fredric. "Future City." *New Left Review* 21, May/June 2003, pp. 65-79.

---. "Postmodernism and Consumer Society." *The Cultural Turn*. Verso, 1998.

Lim, Janice. "Covid-19: Govt launches mobile app which can speed up contact tracing by

    detecting nearby phones with app installed." *TodayOnline*, 20 March 2020,

    https://www.todayonline.com/singapore/covid-19-govt-launches-mobile-app-which-

    can-speed-contact-tracing-detecting-nearby-phones. Accessed 5 July 2020.

Lupton, Deborah. *The Quantified Self*. Polity, 2016.

Mohan, Matthew. "Singapore Police Force can obtain TraceTogether data for criminal

    investigations." *ChannelNewsAsia*, 4 Jan 2021,

https://www.channelnewsasia.com/news/singapore/singapore-police-force-can-obtain-

tracetogether-data-covid-19-13889914. Accessed 5 July 2020.

Ramakrishna, Kumar. "War on COVID-19." *RSIS Commentary*, 15 April 2020,

https://www.rsis.edu.sg/rsis-publication/icpvtr/global-health-security-war-on-covid-19-

more-than-one-front/#.XtIYBBMzYWp. Accessed 5 July 2020.

Rouvroy, Antoinette. "The End(s) of Critique." *Privacy, Due Process and the Computational

Turn*, 2013, pp. 157-182.

Rubenstein, Diane. "'The Conspiracy of Imbeciles,' Reloaded: Baudrillard and the DSK

Affair." *Cultural Politics*, vol. 10, no. 1, 2014, pp. 40-61.

Stiegler, Bernard. *Automatic Society.* Trans Daniel Ross, vol. 1, Polity, 2016.

Tan, Tong Khee and Christopher Matthew. "The War on COVID-19 in Singapore." *Global-is-

Asian*, 28 April 2020, https://lkyspp.nus.edu.sg/gia/article/the-war-on-covid-19-in-

singapore-views-from-the-frontline. Accessed 5 July 2020.

Vismann, Cornelia. "Cultural Techniques and Sovereignty." *Theory, Culture & Society*, vol.

30, no. 6, 2013, pp. 83-93.

Weizmann, Eyal. "Urban Warfare: Walking Through Walls." *Hollow Land*. London: Verso,

2007, pp. 185-220.

Wong, Lester. "Use of TraceTogether app or token mandatory by end Dec." *The Straits Times*,

21 Oct 2020, https://www.straitstimes.com/singapore/use-of-tracetogether-app-or-

token-mandatory-by-end-dec. Accessed 5 July 2020.

Yoneki, E. and J. Crowcroft. "EpiMap: Towards Quantifying Contact Networks for

Understanding Epidemiology in Developing Countries," *Ad Hoc Networks,* vol. 13,

2014, pp. 83-93.

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