Hildebrandt's Onli*fe* World: Public Goods, Design and Politics

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Abstract

This article draws attention to some important themes in Hildebrandt's book and refers to other literature that adds to their practical importance. It highlights the way in which social relationships may be understood in terms of private, social and public spheres. Discussing "inbetween" phenomena as seen analogously in defensible-space physical design, and the concepts of "affordance" and "resilience," it considers the importance of these concepts to the design of an onli*fe* infrastructure preserving the Rule of Law. It asks whether the scenario of an individual's situation in the "smart" environment leaves undeveloped the possibility of an onli*fe* politics in the face of novel and threatening developments.

I. Introduction

Mireille Hildebrandt[1] takes us on an exciting journey, full of unexpected turns, uncertain destinations, rough roads, dark tunnels, impassioned commentary, and thrilling vistas. Sometimes the same place seems to be re-visited without notice, and some stays are too short: if today is Tuesday, this must be due process; if Thursday, this must be morphological computation. On Wednesday, which is inbetween, it was Japan. At the end of the journey, you realize that it was a grand tour, but how will you sort the photos? And what will you tell the children?

To abandon the travel idiom: Hildebrandt casts new and brilliant light on an enormous range of topics and issues. She deploys areas of deep knowledge that needed to be rubbed against each other to make some sense of current and likely future developments of the digital world, and to cultivate some apprehension and gloom about the way things are going, unless—or perhaps even if—we can identify ways of retaining cherished values in the new and tempting world that we conspire to fashion. The values are public goods, including privacy, other freedoms, and the Rule of Law. They are eminently worth defending against those in the state, in companies and at home who would willfully or carelessly cast them aside.

These values involve contested concepts, making it difficult to convince skeptics of their importance. The values require the re-invention, or at least the polishing, of their

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[1] Mireille Hildebrandt, Smart Technologies and the End(s) of Law: Novel Entanglements of Law and Technology (2015).

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protective armor, which demands imagination, skill, and organization. They are all prey to political and commercial pressures towards making us both more "secure" and profligate with our personal data, and making some wealthier. They are all vulnerable to the killing effect of what Postman (following Aldous Huxley) calls "amusing ourselves to death,"[2] or, as Winner terms something of a similar sort, "technological somnambulism."[3] Winner writes that "the interesting puzzle in our times is that we so willingly sleepwalk through the process of reconstituting the conditions of human existence."[4] "In our times" meant the early 1980s: well before the Internet, social media, data-driven everything everywhere, online, offline and Hildebrandt's "onli*fe*"; but his observation remains true. It calls to mind the importance of understanding the politics of these situations, as Winner tried to do but as Hildebrandt somewhat inexplicably seems to underplay. This point will be the subject of a later section.

II. Overview with Brief Comments

The book has three parts: data-driven agency, threats of border control, and the end(s) of law. A few observations will be made on some of the chapters in passing, but more time will be given to selected points that arise from the book, or from the byways, parallel tracks and perhaps *culs de sac* to which they lead, in order to see how they could be taken further and in different directions, and to show how they might be developed to amplify the issues, although that further work must be deferred.

Hildebrandt's prefatory remarks tell us how she set out to write the book, conveying its overarching idea and purpose: to expose the "new animism" of things and systems that foresee what we do and that pre-empt our intentions. This "mindless data-driven agency"[5] is exercised by "smart" devices and robots, creating tensions and animosity between themselves (do they have selves?) and the humans they ostensibly serve. The implications for law—in particular, the Rule of Law—will be the book's main concern. An Introduction gives a scenario of a fictional Diana and then Jacob and Lindsay, and their lives in the "onli*fe*" world. This neologism signifies that "[o]ur current life world can no longer be described by dichotomizing online and offline. . . . Onli*fe* singles out the fact that our 'real' life is neither on- nor offline, but partakes in a new kind of world that we are still discovering."[6] Thus the fictional humans and their servant robots (PDAs: personal digital assistants), who seem to know their mortal "masters" better than the latter do themselves, proceed through daily activities and tribulations wonderfully assisted by the learning algorithms and neural nets of their "smart" companions. Hildebrandt says: "We are facing a transformative life world, situated beyond the increasingly artificial distinction

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[2] Neil Postman, Amusing Ourselves to Death: Public Discourse in the Age of Show Business (1985).

[3] Langdon Winner, The Whale and the Reactor: A Search for Limits in an Age of High Technology 10 (1986).

[4] Id.

[5] Hildebrandt, supra note 1, at viii.

[6] Id. at 42.

between online and offline. To some degree, the upcoming onli*fe* world thrives on artificial life forms, or at least on 'things' that seem to develop a life of their own. These 'things' display a form of data-driven agency"[7] and require "Big Data Space."

This agency is the subject of Part I, which shapes the main problem: how to regulate the information and communication infrastructure of the onli*fe* world in order to protect humans from invisible manipulation and other practices, and from the concomitant threat to rights and freedoms. Part II explores the "digital unconscious" of Diana's onli*fe* world as she develops relationships with her PDA, involving health diagnoses, for example, and the ubiquitous anticipation of her actions and behavior. Whereas the human world features double mutual anticipation of the self and others, in the onli*fe* world, reciprocity is lost: "[W]e have no idea how we are anticipated. We have no access to the inner workings of the software, we don't know how the data we leak will correlate with profiles we don't even know exist."[8]

This is several generations on from Packard's[9] shocking account of how the media subliminally manipulate our desires, based on psychological techniques, for commercial purposes; a later book raised the profile of privacy concerns around new technologies.[10] We might suppose that Diana, the huntress now hunted, and indeed haunted by dark forces that she cannot know or control, is even more vulnerable than the victims in Packard's popular but prescient sociology, for she can neither comprehend nor apprehend the agent of her manipulation, which is neither amenable to reason nor accountable. The agent's diagnoses and anticipation of her desires and behavior may even be more accurate, given the wealth of data it accesses and the sophistication of its algorithms. This may be the more dangerous to our rights and freedoms, too, given the ignorant blindness and obsolescence of the laws and regulatory instruments that were made for another era, but upon which we can only rely in the forlorn hope that they may still have some traction.

Hildebrandt's critical analysis seems light-years away from that fashionable demonization of the advertising industry in midcentury America, where named advertising companies and corporate executives could be identified and sometimes made uncomfortable over the exposure of their commercial stratagems. What was at stake then seems small now, in the light of what today's developments portend; and PDAs have not yet been designed to blush. Yet there is a very familiar ring to this apprehension about Diana's situation. Descriptively or normatively, Jeremy Bentham—whether by way of Foucault or not—and Orwell have opened this window before. Here is Orwell: "There was of course no way of knowing whether you were being watched at any given moment. . . . You have to live—did live, from habit that became instinct—in the assumption that every sound you made was overheard, and, except in darkness, every movement scrutinized."[11]

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[7] Id. at 8.

[8] Id. at 67.

[9] Vance Packard, The Hidden Persuaders (1957).

[10] Vance Packard, The Naked Society (1964).

[11] George Orwell, Nineteen Eighty-Four, at 5 (1949).

But—following Solove[12]—Hildebrandt eschews the "Big Brother" metaphor because it "does not clarify what is at stake in the world of large-scale databases and the detailed personal dossiers they make possible."[13] The new data-driven analytical capacity and agency overturns the (uneasy) settlement between technically based practices employed by business, government, and individuals among themselves, on the one hand, and values and rights, on the other.

Differing from technological determinism, the concept of "affordance" is demonstrably important in this analysis, as will be seen. Socio-technical infrastructures make things more or less possible for agents that use them. Hildebrandt interestingly inquires into this with reference to the advent of written text or script and its affordances, which, in Part III's fascinating discussion, is shown to be integral with modern law. As infrastructures change, different affordances will affect the ability of law's qualities to persist in the new onli*f*e world. This is a major insight. The focus then moves to the onli*f*e world's threat to privacy, identity, freedom and the public good, and to an incisive analysis of social sorting, discrimination, autonomy, the presumption of innocence, and due process. Hildebrandt concludes this by shifting the question from that of one's control of one's personal data—as in standard vanilla-flavored privacy protection—to the less well-rehearsed one of how we can control others' inferential "reading" of our lives through our data.

III. The Private and the Public: Lessons from Japanese Culture

Travel broadens: we next find ourselves in Japan, where the culture provides different perspectives on privacy in the context of social relations that articulate social and moral spaces differently from the way Western societies do it. Japanese culture, in Hildebrandt's example, constructs something "inbetween" humans and society. It constructs "a space, often depicted as an emptiness that nourishes both the selves and the society they originate in and depend on."[14] Leaving Japan aside, the emptiness of inbetween may be filled by the state or by social institutions or groups to the detriment of individuals' privacy, thus negating the self-preserving, self-enhancing, personal-identity-facilitative qualities of the inbetween. It may also be colonized by infrastructures of "computational decision-systems that pre-empt our intent,"[15] by making inferences about us to which we have little access and over which we have little control. To be sure, the Japanese way of negotiating these relationships and metaphorical spaces is culturally structured, as Hildebrandt shows; the etiquette and strategies of these negotiations give us a richer way of thinking about privacy.

The application of the lessons of these constructions is necessary to the extent that the premises upon which non-Japanese protective carapaces have been built are

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[12] Daniel Solove, The Digital Person: Technology and Privacy in the Information Age (2004).

[13] Hildebrandt, supra note 1, at 13.

[14] Id. at 114.

[15] Id. at 115.

showing serious signs of irrelevance. The dichotomous conventional way of thinking about privacy—you have it or you do not; or perhaps, on the other hand, you can give up some of it for more of something else—is bedeviled by these *grands simplificateurs*. These threadbare reflexes persist, repeated *ad nauseam* in the media and policy circles: do you want privacy or do you want security? collective security in the essential national interest, or individual privacy in your own interest or desire? very well, then, we will "strike a balance": guess what? security wins.[16] Hildebrandt's particular target is the unhelpful and rather ignorant dichotomy between the "private" and the "public" that pervades perceptions and polices. It is in dire need of reconstruction to reflect the empirical findings and conceptual refinements contributed by social scientists and a certain kind of academic lawyer who comprehend social relationships and selves in a more nuanced and empirical way. Thus Regan,[17] Schoeman,[18] Altman,[19] Cohen,[20] Nissenbaum,[21] and Steeves[22] are among those who have shown us more fruitful and subtle ways of understanding privacy. Hildebrandt aptly invokes Arendt[23] as a key figure in re-shaping our understanding of the private, social and public spheres towards a better grasp of the public goods and liberties that are at stake.

New perspectives are thus gained: looking outward and upward from persons in their contexts, more than downwards from authoritative institutions that define our privacy but also shape laws, codes and other ways of handling the tensions and conflicts surrounding who should know what, when, where, how and why about individuals. As Hildebrandt clearly explains, privacy and identity construction are closely intertwined in recent scholarship, provided that privacy means something more than solitude and isolation, and that one's notion of identity is also richer than that implied by the piece of plastic in your pocket.[24] Boundaries are also a key concept, but one lesson from such an outlook is that the question of border control, as framed by the Japanese example, is over-

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[16] Charles D. Raab**,** Security, Privacy and Oversight, in Security in a Small Nation: Scotland, Democracy, Politics (Andrew Neal ed., forthcoming 2017).

[17] Priscilla Regan, Legislating Privacy: Technology, Social Values, and Public Policy (1995).

[18] Ferdinand Schoeman, Privacy and Social Freedom (1992).

[19] Irwin Altman, The Environment and Social Behavior: Privacy, Personal Space, Territory, Crowding (1975).

[20] Julie Cohen, Configuring the Networked Self: Law, Code, and the Play of Everyday Practice (2012).

[21] Helen Nissenbaum, Privacy in Context: Technology, Policy, and the Integrity of Social Life (2010).

[22] Valerie Steeves, Reclaiming the Social Value of Privacy, in Lessons from the Identity Trail: Anonymity, Privacy and Identity in a Networked Society 191 (Ian Kerr et al. eds., 2009); see also Charles D. Raab, Privacy, Social Values and the Public Interest, in Politik und die Regulierung von Information [Politics and the Regulation of Information] 129 (Andreas Busch & Jeanette Hofmann eds., 2012) (Politische Vierteljahresschrift Sonderheft 46); Charles D. Raab, Privacy as a Security Value, in Jon Bing: En Hyllest / A Tribute 39 (Dag Wiese Schartum et al. eds., 2014).

[23] Hannah Arendt, The Human Condition (1958).

[24] Charles D. Raab, Identity: Difference and Categorization, in Lessons from the Identity Trail: Anonymity, Privacy and Identity in a Networked Society 227 (Ian Kerr et al. eds., 2009).

taken by the perception of multiple borders involved in relationships and transactions, not just one dimension of being inside or outside; Goffman[25] is a master of this genre, and his analysis of "face-work"[26] is particularly apposite although arguably Western-culturally specific.

IV. Inbetweenness and the Importance of Design

This calls to mind, by way of similarities and differences, research in another field—physical planning—in which the positioning of something "inbetween" conventional categories has had an important impact on practice and on the way we think about binaries, whether in real, social or metaphorical space. This work also engages with the concept of "affordance" if we focus upon tools and techniques aimed at providing safety in certain settings, and the same concept also has important implications for privacy. Thus Newman's understanding of "defensible space"[27] looks at architecture and crime by considering how residents perceive and use spaces in terms of what is private and what is public. These two types are ambiguous, shaped by various legal and social interpretations that do not necessary pull in the same direction, but—as Newman shows—they do not exhaust the possibilities, and indeed provoke questions about their validity in differentiating spaces and the norms that govern them. What is more, their poor correspondence to the way residents interpret their milieu creates squalid and potentially or actually crime-prone "no-man's lands" in the interstices between the public and the private. Certain spaces are construed as outside anyone's legitimate control, neither "mine" nor "theirs." These hybrid spaces require greater definition and common understandings if they are to be salubrious and safe. Newman seeks to disambiguate the middle, creating surveilled spaces and investing them with normative value, making them less likely to be neglected or used for disorderly or criminal purposes.

Newman's work is about crime reduction and public order at the level of the residential community through rules, behavioral codes and sanctions that can be shaped by physical and social mechanisms to "design out crime." The view that order has to do with certainty, predictability and unambiguity has affinities with Goffman's analysis of the actual or potentially conflicting use of certain spaces traversed in everyday life, where the applicable rules are in doubt. Newman does not see his design strategy, or physical forms, as determinist. He writes: "The form of buildings and their arrangement can either discourage or encourage people to take an active part in policing while they go about their

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[25] Erving Goffman, Relations in Public: Microstudies of the Public Order (1971); Behavior in Public Places (1963); The Presentation of Self in Everyday Life (1959).

[26] Erving Goffman, Interaction Ritual: Essays on Face-to-Face Behavior (1967).

[27] Oscar Newman, Defensible Space: Crime Prevention Through Urban Design (1973). Such analyses fed an initiative in law enforcement, architecture and urban planning towards "designing out crime." The efficacy of design remedies was challenged for lack of clear evidence, but also for neglecting to tackle the roots of social disorder while tinkering with physical solutions.

daily business."[28] Regarding the interaction of spatial and social phenomena, he emphasizes that "[a]rchitecture operates more in the area of 'influence' than control. It can create a setting conducive to realizing the *potential* of mutual concern. It does not and cannot manipulate people towards these feelings, but rather allows mutually benefitting attitudes to surface."[29] "Affordance" does seem a pertinent concept to guide and to understand the physical and social strategies for making space defensible. Areas are redefined to clarify the space inbetween the conventional binary ones, valorizing the social and individual surveillance that reinforces a kind of common "ownership" and therefore responsibility over the reconceptualized spaces. The physical and social reconfiguration of space provides affordances that may or may not be compatible with legal and other norms; this is a matter upon which Hildebrandt dwells in the different context of the infrastructure of the onli*f*e world and how it might be designed to preserve privacy, non-discrimination, and the requirements of justice, legal certainty and purposiveness.

"Defensible space" does not necessarily negate those *desiderata*, but it would be important to demonstrate the compatibility of the spatial design affordances with them, and of order with justice, as well as to engage with political and legal theory concerning ownership, appropriation, and the right to use without intimidation what is legally public space. The example of spatial design also ignores the juxtaposition and possible incompatibility of the rules and norms that obtain in the residential area with those of the wider, or maximal society within which it nests. Neither this commentary, nor Hildebrandt's writing on law and technology, would be the best place to wade into the thickets of "legal pluralism" and its roots in classical sociology and anthropology.[30] But Pospisil's[31] concept of a multiplicity of legal levels and legal systems coexisting in the same "society" could provide insights into Newman's construct, and arguably also into Hildebrandt's field as well, in which the incarnation of the onli*f*e world, or worlds—and their norms and rules—might be different in the plural domains and spheres of a society that she recognizes, and that she finely discusses in describing contextualism and border-control practices within Japanese social relations.

In the onli*f*e world, what is human and what is artificial, and the boundary between them, grow blurred as these two erstwhile opposing forms *themselves* become ambiguous. Although this may differ from the apparent certainty of "public" and "private" in the re-shaped spaces of housing estates, the spatial-design case may have value in thinking about the design of an onli*f*e infrastructure that preserves the Rule of Law, and raises issues that could profitably be addressed within the subject-matter of Part III. There, she focuses crucially and insightfully upon law, its entanglements with technology

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[28] Id. at 3.

[29] Id. at 207 (emphasis in original).

[30] Baudouin Dupret, Legal Pluralism, Plurality of Laws, and Legal Practices: Theories, Critiques, and Praxiological Re-Specification, 1 Eur. J. Legal Stud. 1 (2007).

[31] Leopold Pospisil, Anthropology of Law: A Comparative Theory (1971); Legal Levels and Multiplicity of Legal Systems in Human Societies, 11 J. Conflict Resol. 2 (1967).

(importantly including writing), the question of technologically neutral law, and issues surrounding the right to data protection and the initiative for using technical design to protect privacy and personal data. The spatial example points up the relevance of "affordances" and "inbetween" as analytical handles in analyzing situations in which technologies, privacy and policy or practice merge These handles could enhance Hildebrandt's approach in relation to the digital data context, for which she fears that crucial legal (and social and ethical) principles will be discarded if they hinder technological innovation and scientific progress. It would be interesting to see the possibilities and limitations of reading "designing out crime" across to "designing in privacy/data protection" or "designing in law" (LPbD, or legal protection by design), when it comes to implementing data protection by design and default, for example.

That excursion cannot be taken here, but it would be instructive in view of the new EU Data Protection Regulation's requirement of data protection by design and default.[32] Beyond the final chapter's stirring exhortation to inhabit the barricades and to take up the challenge, there is a need for detail about how the design of technological developments, seen as a regulatory policy option, can enhance justice, legal certainty and purposiveness, and how it beds down among the contradictory factors and forces beyond the design laboratory. Remarks on morphological computation and the design of robots make a promising start, and perhaps these can be elaborated and reoriented in subsequent writing. Hildebrandt enlists governments, lawyers and the ubiquitous "we" in the campaign, but who should do what, separately and together, in what sequence, and who else, are not indicated; nor are the companies and technologists who would necessarily be involved. These are institutional role equivalents of the social arrangements that Newman expects will work with spatial design, and they should be stipulated for Hildebrandt's design solutions. And what about Diana, whether as unwitting subject or as contributing citizen, stimulated to arise from her vinous slumber and get stuck into the democratic political processes that Hildebrandt seems to suggest are the way to safeguard the Rule of Law and all its associated good things?

Any regulatory strategy involves many actors, and it is important to specify and analyze the tools, actors and performances to be deployed in this design endeavor, as in the more mundane provision of data protection regimes.[33] There is also a need to handle synergies and conflicts among the techniques and performances of this LPbD initiative, to understand the affordances of each contributory item and to exploit the affordances of their combination whilst reducing their conflicts. Radbruch's[34] conceptions of law's three

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[32] Neither the Regulation nor its Recitals have robotics and the "smart" world specifically in their sights.

[33] Charles D. Raab & Bert-Jaap Koops, Privacy Actors, Performances and the Future of Privacy Protection, in Reinventing Data Protection? 207 (Serge Gutwirth et al. eds., 2009); Charles D. Raab & Paul De Hert, Tools for Technology Regulation: Seeking Analytical Approaches Beyond Lessig and Hood, in Regulating Technologies: Legal Futures, Regulatory Frames and Technological Fixes 263 (Roger Brownsword & Karen Yeung eds., 2008).

[34] See Hildebrandt, supra note 1, at 148-55 (citing Gustav Radbruch, Legal Philosophy, in The Legal Philosophies of Lisk, Radbruch, and Dabin 43 (Kurt Wilk trans., 2014 reprint) (1950)).

aims (justice, legal certainty and purpose), as endorsed by Hildebrandt, seem relevant here, perhaps in particular that of certainty, whether of the legal, the informal normative, or the psychosocial interactionist sort. Defensible-space design eliminates ambiguity and thus the uncertainty of what to expect when occupying or traversing more clearly designed areas, but there is a price to pay if the remedy for some people's unsafety—the goal—displaces unsafety onto other people in terms of restricted liberty and privacy through increased surveillance: a point not considered by Newman. Whether this expectation of privacy is legitimate or "reasonable"—the term used in privacy discourse about situations involving "private" and "public" zones—especially if it means a reduction of values and rights through "social pressures," would be worth debating, and also applying more specifically than Hildebrandt does, to human interactions with on*li*fe infrastructures. Hildebrandt's[35] earlier critical visit to the question of "balance" and "trade-off" is germane here but not deployed in the book, although the idiom of "balance" is itself questionable.[36] With LPbD, she aims to pay "attention to the 'resistability' and contestability of the ensuing normativity [of an information and communications infrastructure]," and to "involve testing how the configuration or design of the affordances can best serve the goals of justice, legal certainty and purposiveness."[37] These are very important undertakings.

V. The Relevance of Resilience

A further concept, "resilience," could also be brought to bear upon the on*li*fe world,[38] and is implicit in Hildebrandt's suggested solution. A related term, "resistance," could be said to underlie the push-back exemplified by LPbD, but in the on*li*fe world it might be doubted that this could amount to a popular front against the computational world; more an élite strategy enlisting lawyers and academics as the enlightened conscience of society. How could Diana act either to prevent or to mitigate the threats to her enjoyment of privacy and other rights, freedoms, and public goods, thus resiliently "bouncing back" to maintain or strengthen her position as a human agent in the face of stresses and shocks brought about by unknown and uncontrollable manipulative uses of data? Will the convenience and comfort furnished by mindless robots turn her into an unwitting "boiling frog," with terminal consequences to her cherished values? Has she been "sleepwalking into a surveillance society," or will she wake up, smell the coffee that the robot has brewed for her, and take steps to reassert control over her on*li*fe? What preventative steps could be taken, and what mitigating steps if damage has been done? How does she learn

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[35] Mireille Hildebrandt, Balance or Trade-off? Online Security Technologies and Fundamental Rights, 26 Phil. & Tech. 357 (2013).

[36] See Raab, supra note 16; Jeremy Waldron, Security and Liberty: The Image of Balance, 11 J. Political Phil. 191 (2003); Ronald Dworkin, Taking Rights Seriously (1977); Charles D. Raab, From Balancing to Steering: New Directions for Data Protection, in Visions of Privacy: Policy Approaches for the Digital Age 68 (Colin Bennett and Rebecca Grant eds., 1999).

[37] Hildebrandt, supra note 1, at 218.

[38] Charles D. Raab et al., Surveillance and Resilience in Theory and Practice, 3 Media & Comm. 21 (2015).

in order to improve her resilient performance? Can the finely observed strategies and tactics described by Goffman, whereby people resiliently negotiate their everyday lives using situational artefacts and other persons, be updated in order to have purchase in the onli*fe* world? This remains unexplored but intriguing territory.

Resilience is indeed mentioned although not explicitly explored in the book: this is with regard to the vulnerability of computational systems through subversive penetrating attacks or breakdowns that threaten security and safety. For additional security, resilience strategies are needed against these dangers. Hildebrandt has already considered the drawbacks to this elsewhere [39] and may do so in the future. But how people can be resilient in the face of a security agenda that drives the working of computational systems, and that threatens other human values, is not examined. Although she dismisses "surveillance" as an issue to be faced in this book, it is perhaps not so easily cast aside if we—and she does indeed—consider that the onli*fe* world's infrastructures and agents are deeply surveillant in their techniques and effects, and that "the onli*fe* world can be designed in a way that allows for massive spying and subliminal nudging."[40]

It is a relief that this is not just another book cast in the idiom of "surveillance"—although, if a term be needed, Clarke's "dataveillance"[41] would probably do. Nor is it just another book on "privacy," although much of what is at stake has to do with how that right and value can be protected, and—despite the valid conceptual distinction between privacy and data protection—the practically focused concluding chapter is informed by the strategic idea behind data protection law's "privacy by design." But the book shares a concern with these more conventionally labeled works by showing how a corner has been turned in the development of "smart" systems and human-machine interactions based on massive data computation, and how "we" need to respond to fresh challenges. How is this political stance to be comprehended and empowered?

VI. Towards Onli*fe* Politics

There is a further resilience story to tell in Hildebrandt's account of mitigating or limiting the adverse consequences of data-driven agency, but it is not so clearly told at the level of the individual. Hildebrandt notes: "At some point we will become aware of the fact that we are being watched and anticipated by machines and we will try to figure out how the infrastructure 'reads' us and with whom it shares its knowledge of our preferences and of the risks we incorporate. One of the issues…is whether we *will* manage to figure this out . . . ."[42] It would be worth exploring *how* the individual figures it out: by herself? by reading various media? through activists' campaigning groups? through Snowden-like whistleblowing? It would also be worth considering what that newly enlightened individual might

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[39] Hildebrandt, supra note 35.

[40] Id. at 14.

[41] Roger Clarke, Information Technology and Dataveillance, 31 Commun. ACM 498 (1988).

[42] Hildebrandt, supra note 1, at 11 (emphasis in original).

do to protect herself, asserting her rights, freedoms, and claims to public goods, joining protests or boycotts, petitioning her elected representatives, and closing off certain avenues of affordance in the robotic devices with which she interacts. But perhaps there is little she can do, little resilience or resistance she can exercise, and perhaps that is the silent message of a book that turns to other valid opportunities for prevention or remedy. If that is the case, a politics of personal and social (in)action in the onli*fe* world has to be written and, if it were possible to do so, even inform resilient practice.

Despite the affordances of the sociologically aware analytical frameworks set out by Nissenbaum, Altman, Schoeman and others in understanding how privacy and boundary transactions work, there is nothing in the Diana scenario that would cast light on how this might or might not be achieved in the onli*fe* world. That could be a foregone opportunity to enrich the book's discussion in a socio-political direction. The apathetic Diana is anything but an agent: she is seen interacting with hardly anyone outside the small circle of her workplace colleagues, her daughter, her ex-husband, and the head of her daughter's school. She does not question the school's monitoring of her daughter's behavioral biometrics for predictive purposes relating to diseases, nor her own gym's recording, storing and communication of her biometric data. Diana seems to complain about nothing, and to blame no-one for anything. Instead, she relaxes with a glass of white wine and "drifts off into a pleasant oblivion."[43]

In cultural-theory terms, Diana is an isolate, and maybe also a fatalist in her onli*fe* world if we knew more about her attitude to risk. Her oblivion is not only alcohol-induced, but comes with the territory of her depoliticization, arguably induced by the amusement and convenience afforded by her technology-saturated world. If the scenario had shown her in the context of the public sector and the state's intensive use of her data, she would likely have swallowed the justificatory propaganda that would have centered on the gain to her "security" and "safety," playing on her fears, but not involving the active and social collaboration she would have performed had she resided in Newman's defensibly designed housing estate. Perhaps she has a touching faith in the state, the law and technology to keep her onli*fe* world safe, liberal and under the Rule of Law. But Hildebrandt writes: "the extent to which the subliminal regulation takes place will depend on *how* we design these infrastructures and whether we find ways to inscribe legal protection into them."[44]

This could be reframed explicitly as a designated route that runs through collective political action—facilitated by the space afforded to it by privacy protection—engaging with the state and government, and through the law. Written law is by itself inadequate for regulation, and we must rely more on democratically and politically promoted design, which is taken up in the final chapter. But where in jurisdictional space, from the local to the global, these solutions are to be found, is not indicated.

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[43] Id. at 3.

[44] Id. at 9 (emphasis in original).

Thus Hildebrandt's guided tour is not yet finished; we are not yet home and dry. A gap in this very rich analysis of law and the technologies under investigation is the *politics* of how we got to where we are and how we are to get out of it by reaching a solution that restores to a central position the threatened values and public goods. This is not just the mundane politics that is studied by political scientists and specialists in international relations, although those processes, institutions, ideas and behavioral forms are crucial to any understanding of how they would work in the onli*f*e context. The study of politics is in large part the study of power and influence, decision- and policy-making, and the resolution of conflict. Though these are instinct in Hildebrandt's book, they are rather scattered. Even if they play an effective part where they appear, it is difficult to get a comprehensive sense of the politics of "smart" technologies and the end(s) of law. How technologies should be, or are, regulated is a major theme of the book. Regulatory policy as part of the study of politics, with an underpinning of models, concepts, comparisons, and analytical dimensions, could be brought to bear on delineating the limitations and perhaps affordances of the conventional array of regulatory strategies for the onli*f*e world.

In addition, and integral to the above, the study of politics involves *political theory.* There is an implicit political theory in Newman, but a political theory of the onli*f*e world (and its rescue through design) is yet to be written, whether it be identical to, different from, or a distortion of, what we take to be the political theory informing liberal democracy. Elements of this are already briefly glimpsed in Hildebrandt's book in terms of the questions of discrimination, equality, liberty, authority, and others; in regard to the distribution of power and the disempowerment that accompanies knowledge asymmetry about pre-emptive computing systems;[45] to the relationship between law and the exercise of political power by the state; and to transparency and accountability. These could be consolidated to good effect.

VII. Conclusion

Reverting to the idiom of journeying: we have collected souvenirs that give views of the political, and that contribute to understanding and possibly to acting. If these have not (yet) crystallized into a rounded story from the standpoint of—speaking vaguely—the politics of the onli*f*e world, it cannot be taken as forceful criticism of a book that never intended to do that kind of thing, and that has so many commendable qualities as a path-breaking and insightful analysis of the subject. Yet there are further places to visit and stories to be told, of which the political one—in the broad sense—seems a likely vehicle for applying analytical frames, concepts and methods drawn from a different discipline. Can such a political science and political theory be written, perhaps before robots get together and petition for voting rights? If this is Friday, it must be . . . .

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[45] Lukes's theorization of the concept of power is apposite here. See Steven Lukes, Power: A Radical View (1974).