
PhD Thesis: Emergent Topics, Concepts & Themes

A component for completion of thesis:

**'The Socioethical Implications of Body Worn Computers:
An Ethnographic Study'**

Alexander Hayes

BA (Education), BA (Art) Distinction, BFA (Hons),
PhD (Computing & Information Technology)

Supervisor

Professor Katina Michael University of Wollongong, Australia

Co-Supervisor

Dr. Roba Abbas University of Wollongong, Australia

Associate Supervisor

Professor Teemu Leinonen Aalto University, Finland

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Introduction

From early 2009 through until the submission of the Phd thesis 'The Social Implications of Body Worn Computers: An Ethnographic Study' the researcher Alexander Hayes compiled notes in self reflection that were then tagged using keywords and key terms using the authoring tool Scrivener. Over the 11 year period these notes were then categorised and employed in the written description of fully articulated posts in the researchers online research journal.

This research was conducted in the Faculty of Engineering and Information Systems, School of Computing and Information Technology (SCIT) at the University of Wollongong with research strength Innovation in Business & Social Research under Principal Supervisor Professor Katina Michael (University of Wollongong) and Associate Supervisor Dr Teemu Leinonen (Aalto University Finland). The full thesis can be accessed at <https://ro.uow.edu.au/theses1/853>

This data collection was created in Figshare in early 2019 with the original title of 'PhD Thesis: Emergent Themes' and a DOI was reserved for the final deposition of this document post thesis submission in late 2020. During final titration of the main empirical evidence in tabulated form, the researcher noted a substantial finding of correlations and aberrations that arise when considering the thematic overtures which emergent when examining those notes, posts and the main Research Participant lexicon, which is available for download at https://figshare.com/articles/online_resource/PhD_Thesis_-_Lexicon/11887791.

As a result of this consideration, a key finding arose when considering the correlations between data, as the analytical process evolved from simple synthesis to cohesive awareness. Each granular assay of observance involved examining research participants responses were often their own dissection of topics in conversation, using key terms which participants considered important and concept 'clustering' to illustrate their understanding, knowledge and experience as they answered interview questions. In the synthesis of these concept clusters using qualitative text analysis tools such as Leximancer and in analysis of coding of concept clusters using Atlas.TI which arose in discussions, conversation or in

answering interview questions and answers, a set of emergent themes were identified by the researcher.

This correlation between topics, broken down into concept clusters and themes reveals a set of data that opens up an awareness for the researcher with which to compose analysis, describe findings and formulate grounded theory through rich description. A Foucauldian Discourse analysis provides an even deeper insight into the main topic of research investigation but also reveals the research participants literal closeness and understanding of the social and ethical implications of body worn computers. It is therefore important to note that the publication title was updated to 'PhD Thesis: Emergent Topics, Concepts and Themes' as testament to the process synthesis of key themes, considering the topics, concepts and themes as inseparable from each other in this research investigation presentation.

1.0 Emergent Topics

During the four (4) main stages of this research project the researcher sought opportunities to engage stakeholders in conversation focused on their expertise aligned with the research topic, then in an intensive praxis critically appraising these ideas in both self reflection and analysis of empirical data.

In listening, during and after each conversation with experts, BWCs were identified as one small part of a much larger story, that of wearable computing and hence this human connection and shared purpose of exploring the social and ethical implications of BWCs then emerged as the true value proposition for this research. As a result of this ethnographic process, new knowledge and critical understanding of the research topic arose, in which the researcher as a participant observer gained a better perspective of BWCs through what is known as 'interpretive reflexivity'. (Lichterman, 2017).

This methodological approach which focused on 'listening' is aligned with the works of Pierre Bourdieu as detailed by (Murdock, 2010), where the ethnographer has the potential to provide a 'universalising view' and in the process of identifying facts the ethnographer, (as sociologist) discharges non verifiable assumptions, adding to new knowledge through critical discourse analysis of power relations and higher level interpretations via interpretive reflexivity. Using a granular axial coding process of highlighting single words, combined words or key terms in Atlas.Ti of all participant responses, an examination of the resultant 'Code Bank' highlighted a distinct link between themes in lexical format (single terms) and by association (single and combined terms) affiliated or related concepts.

The researcher reinforces that this visualisation of data derivative of Atlas.Ti open and in vivo coding would (given the same data set) be entirely replicable and the methodology uniquely transferable according to the interpretations of each individual researcher. In lay terms, if the same methodology and form of representation was assigned to be used by another researcher the results would differ according to the researcher's interpretation, yet the rank, theme and concept associations would likely

extrapolate similarly. This is verifiable by scanning all forty thematic and related concept clusters and considering in entirety the relationships based on four separate yet ostensibly interrelated criteria:

1. *Human Issues* - concepts which manifest in lifeworld of humans including socially transmissible understandings;
2. *Technological Factors* - relationally of human lifeworlds and technologies;
3. *Actors* - descriptions of type;
4. *Higher Order Concepts* - complex meta-level concepts.

Each and every theme or concept has in this case been considered and assigned one of those criteria as a means to emphasise the distinct differences in semantic association, by example, 'things' (N=20) has been assigned a 'Higher Order Concept' by criteria due to the researchers overarching knowledge of how influential this concept is across the entire dataset. This is also evidenced by its distinct appearance in numerous single participants as well as stakeholder group Concept Maps.

A tabular representation matches without assumption the expressions of participants responding to interview questions or in conversation as cogently expressed in strings such as 'ethics' (31); 'future' (26); 'society' (22); 'policing' (20) and 'risks' (18). This methodological approach, analysis and visualisation of data is clearly a process of the researcher instinctually aligning concepts as clusters and related themes. The omission of codes differentiates systematic comparative analysis by assessment, with the titration and visualisation of code rank, theme and concept cluster viable as a methodology in the construction of Grounded Theory.

TOPICS		CONCEPT 1		CONCEPT 2		CONCEPT 3		CONCEPT 4	
privacy	83	privacy issues	61	privacy concerns	35	privacy implications	33	consent	25
geolocation	64	tracking	58	GPS	33	information	32	monitoring	23
data	58	surveillance	56	recording	31	government	21	CCTV	20
event	55	technology	54	digital realities	30	Internet	20	things	20
body	36	wearable	27	handheld	24	embedded	19	implantable	18
ethics	31	future	26	society	22	policing	20	risks	18
control	30	computing	22	memory	22	camera	20	change	16
devices	28	systems	22	wearable camera	20	wearable computing	19	access	17
smart	26	smartphones	24	point-of-view	19	lifelogging	17	permissions	15
trust	25	convenience	28	benefits	16	care	15	context	14
place	18	connection	15	cultural practices	15	humanity	14	awareness	12
history	14	education	13	learning	13	research	12	training	11
rules	12	freedom	11	fear	11	transparency	11	rights	12
use	12	environments	11	applications	11	choices	11	potential	15
implications	10	LBS	11	perception	11	safety	11	time	10
intelligence	11	law	10	military	10	public	10	legislation	10
security	11	world	10	differences	9	facial recognition	9	community	9
classroom	10	students	10	use case	9	workplace	9	data collection	8
values	10	behaviour	10	subject rights	9	interaction	9	person	8
identity	9	accountability	9	self awareness	9	power	9	acceptance	8
convergence	9	cyborgs	8	conversations	8	actual vs perceived	8	absolute reality	8
purpose	8	perspectives	8	capture	7	questions	7	social implications	7
whereabouts	7	accuracy	7	individual	7	investigations	7	understanding	6
ubiquitous	7	concerns	7	intimacy	6	harm	6	trajectory	6
development	7	design	7	communication	7	adoption	6	autonomy	6
utility	6	function	6	ease of use	6	application	6	automation	6
development	7	design	7	opportunity	7	adoption	6	business	6
connectedness	6	challenge	6	answers	6	feedback loop	6	self reflection	6
state	6	social networks	6	secrets	6	advantage	6	crime	6
corporations	6	consumers	6	nudging	5	social sorting	5	entrapment	5
human rights	6	human exp.	5	debate	5	discussions	5	consumer rights	5
evolution	5	augmentation	5	beliefs	5	inevitable	5	Singularity	5
cloud	5	decisions	4	expectation	4	exposure	4	addiction	4
opt out	4	escape	4	etiquette	4	power of retraction	4	lens	4
prediction	4	sensing	4	proximity	4	quantified self	4	profiles	4
equity	4	effects	4	forfeiture	4	heath	4	liberation	4
storytelling	4	use case	4	scenario	4	activity	4	adaption	4
augmented	4	code	4	processing	4	encryption	4	distraction	4
institution	4	partnerships	4	pedagogy	4	industry	4	analytics	4
Aboriginal	4	transmission	4	actual	4	individuals	4	earth	4

Legend	# Rank	Human Issues	Technological Factors	Actors	Higher Order Concepts
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Table 17. Emergent Topics (& Related Concept Clusters)

2.0 Emergent Concepts

This research investigation brought together eight (8) key stakeholders groups from five (5) continents, with all fifty (50) participants having either direct experience with body worn camera technologies or contact through their profession and research with wearable computing.

A strategy was devised to ‘make meaning’ by analysis of data derived from individual interviews and stakeholder groups. Coding and content analysis were then represented using tabular, visual concept maps, critical discourse inclusion and reflective interpretations in narrative throughout Chapter 6, Socioethical Implications which then culminates as a synthesis of knowledge in Chapter 7, Discussion. When considering how to analyse the amassed range of codes assigned to concepts and associated themes, the researcher determined that a Lexicon: Appendix 9.8 provides a strong visual representation of lexical associations.

Likewise, with due diligence, a careful examination of occurrence and weighted association of terms derivative of Atlas.Ti code lists and code manager can then be represented using a tabular format, aligning emergent themes and concept clusters in *Table 17: Emergent Topics & Related Concept Clusters*. As an example of an emergent theme, ‘privacy’ comprises many intersecting conceptual clusters which emerges from all fifty interviews with the rare exception, BWCs are considered as contributing to the erosion of privacy in a contemporaneous techno-centric and capitalist consumer global climate.

I’m sensitive to collateral intrusion of privacy. I’ve got no particular objection to anybody wishing to sort of chronicle their life using images or sound recordings, however I have no particular desire to feature in those chronicles.
(Harfield, 2012, p.9)

Central to this argument is the arguable ‘benefit’ which corporations promote to gain vast quantities of personal data, often positioning ‘users’ location in time and place as an event enriched with locational whereabouts.

I tend to see more potential harm or damage, primarily because although the individual that is wearing it obviously has consented to wearing it and by using it everybody within their vicinity has not and therefore it becomes a personal CCTV in that regard. (Mathews, 2013)

The falsity of 'enamoured worship of things' the researcher points out must not be attributed value as anything more than the numerical predominance of this discrete concept cluster in content analysis. Notably though, participants that refer to humans as 'resources' or 'users' or 'things' or 'numbers' are often proven to also refer to inanimate devices as having 'intelligence', being 'responsive' and 'communicating' in a 'relationship'.

The emergent counter-discourse to that of a western capitalist development and associated paradigm is evident in the discussion chapter of this research. It is derivative of immersive and reflection research activities, an identification of cultural practices and values that serve as an indicator of power relations, cultural phenomena that manifests with the prevalence or absence of things in a society, for example the presence of surveillance and absence of culture. (Hayes, 2019b, p.30).

By enumerating single concepts and then interrelating their clusters, a process of taxonomy based on conceptual structures, where individual participant, stakeholder and event collections are visualised for ease of comparison using an array of elements: (a.) 'Collection Identity'; (b.) 'Type'; (c.) 'Percentile Delimiter' and (c.) Primary; or (d.) Secondary concepts. The many unique factors which influence how each participant or stakeholders data collection can be interpreted or indeed how these influence thematic representation, is principally by omission (by concept adjustment delimitation) of the many items, terms, names and other forms demonstrable in the 'appearance' or 'disappearance' of nodes in the visual 'Concept Map'.

The primary taxonomy organises much data and several previous taxonomies into a single framework. It suggests that many concept types exist, and that type determines how a concept is learned, is used and how it develops. (Howard, 1992)

A comparative analysis of the outputs from Leximancer of the entire corpus of Social Concept Maps (Gaussian) and Topical Concept Maps reveals a range of factors that 'extend, corroborate, complicate, contradict, correct, or debate one another' as described by (Walk, 1998).

ID	TYPE	COLLECTION	%	CONCEPT	CONCEPT	CONCEPT	CONCEPT	CONCEPT
1	Participant	Amir Aryani	72	devices	use [2]	social [3]	-	-
2	Participant	Merja Bauters	55	remember [4]	people [5]	means [3]	time	use [2]
3	Participant	Gordon Bell	64	location [3]	devices [4]	body	lifeteks [2]	-
4	Participant	Samir Bhowmik	84	world	certain [1]	choice [2]	-	-
5	Participant	Leigh Blackall	46	things [2]	location	body [3]	issues [4]	risk [5]
6	Participant	David Blackall	64	technologies	guidelines [4]	military [3]	knows [2]	-
7	Participant	Simon Brown	59	recording [2]	device	mobile [3]	change [4]	job [5]
8	Participant	Mat Brown	49	location	things [2]	people [4]	data [3]	photos [5]
9	Participant	Tim Burns	61	surveillance [3]	Facebook [5]	looking	control [2]	system [4]
10	Participant	Niamh Caprani	52	looking	people [2]	studies [3]	life [5]	images [4]
11	Participant	Roger Clarke	84	use [3]	person	things [2]	-	-
12	Participant	Andrew Clement	56	technologies	utopianism [3]	increasing [4]	people [2]	-
13	Participant	Michael Coghlan	68	looking [2]	people	things [3]	issue [4]	-
14	Participant	Chris Davies	72	interesting [5]	phone [3]	people [2]	different [4]	device
15	Participant	Nikola Danaylov	82	democratize [2]	technology [3]	experience [4]	time	-
16	Participant	Kiwi Wearables	63	understand [3]	research [2]	data	opposed [4]	-
17	Participant	Eva Durall	69	technology [3]	interesting [4]	recording [5]	things	data [2]
18	Participant	Interviewee 18	76	technology [2]	device	human [3]	private [4]	-
19	Participant	Cathal Gurrin	62	people [2]	technology [3]	data	location [4]	probably [5]
20	Participant	Clive Harfield	68	computer [5]	wearable [3]	information [2]	fact [4]	use
21	Participant	Ori Inbar	70	people	digital [2]	context [3]	IEEE [4]	-
22	Participant	Ryan Janzen	65	human [3]	people	things [4]	physical [5]	different [2]
23	Participant	Larry Johnson	74	technology	things [2]	interesting [4]	body [3]	-
24	Participant	Martin Kallstrom	79	believe [2]	need	possible [3]	-	-
25	Participant	Tarmo Toikannen	86	probably [3]	parents [2]	use	-	-
26	Participant	Teemu Leinonen	76	phone [3]	things	aware [2]	-	-
27	Participant	Geoff Lubich	62	things [3]	students [4]	areas [2]	use	police [5]
28	Participant	Deitmer Ludger	80	computers	technology [2]	Involved [3]	-	-
29	Participant	Rob Manson	87	things [3]	wearable	work [2]	-	-
30	Participant	Scott S. Mathews	78	doing	looking [2]	-	-	-
LEGEND		ORDER	[%]	PRIMARY CONCEPT		SECONDARY CONCEPTS		

Table 22. Social Concept Maps: Gaussian (ID# 1-30)

ID	TYPE	COLLECTION	%	CONCEPT	CONCEPT	CONCEPT	CONCEPT	CONCEPT
31	Participant	James Neil	59	wearing	probably [2]	computer [5]	using [5]	things [3]
32	Participant	Nick O'Brien	82	camera [3]	people	things [2]	-	-
33	Participant	Scott O'Brien	65	people	world [2]	education [4]	use [3]	-
34	Participant	Glenn Payne	78	learning [3]	look	use [2]	-	-
35	Participant	Christine Perakslis	61	students	online [5]	look [2]	different [3]	wanted [4]
36	Participant	Jeremy Pitt	71	course [2]	people	-	-	-
37	Participant	Simon Pockley	69	information [2]	sense [3]	people	things [4]	-
38	Participant	Jeff Porten	56	government [5]	technology [2]	people [3]	data [4]	privacy
39	Participant	Interviewee 39	69	someone [1]	technology [2]	humanity [3]	feel	-
40	Participant	Jukka Purma	71	understand	technology [2]	similar [4]	used [3]	-
41	Participant	Simon Randall	78	product [2]	people	use [4]	images [3]	-
42	Participant	Peter Rawsthorne	60	learning	device [2]	appliance [3]	body [4]	-
43	Participant	Stephan Ridgway	86	computer [3]	networks	computer [4]	human [2]	-
44	Participant	Tom Worthington	72	location [3]	research [4]	computer	use [2]	-
45	Participant	George Siemens	77	networks [2]	data	activity [3]	-	-
46	Participant	Colin Simpson	58	time [4]	people [3]	phone [2]	need	-
47	Participant	Vance Stevens	65	teacher [5]	people	device [2]	time [3]	doing [4]
48	Participant	Erik Stolterman	69	computational	technology [2]	design [3]	aspects [4]	-
49	Participant	Liz Swan	71	technology [2]	classroom	-	-	-
50	Participant	Interviewee 50	70	time [2]	computers [3]	devices	engage [4]	school [5]
51	Stakeholder	Business Intel.	83	use	data [3]	people [2]	-	-
52	Stakeholder	Digital Cultures	77	information [2]	people	work [3]	-	-
53	Stakeholder	Invention	66	technology	people [2]	data [3]	person [4]	-
54	Stakeholder	Social Comment.	74	information [3]	control [4]	work [2]	use	question [5]
55	Stakeholder	Learning Design	69	information [3]	computer	people [2]	time [4]	-
56	Stakeholder	Business Develop.	56	time [3]	feel [2]	people	take [4]	-
57	Stakeholder	HCI	89	use	privacy [2]	people [3]	-	-
58	Stakeholder	Policy & Reg.	83	information [3]	use [2]	things	-	-
59	Stakeholder	All Stakeholders	86	people	computer [2]	work [3]	-	-
60	Event	ISTAS13 Symp.	67	privacy [3]	computing [4]	people	data [4]	reality [5]
LEGEND		ORDER	[#]	PRIMARY CONCEPT		SECONDARY CONCEPT		

Table 23. Social Concept Maps: Gaussian (ID# 31-60)

ID	TYPE	COLLECTION	%	CONCEPT	CONCEPT	CONCEPT	CONCEPT	CONCEPT
1	Participant	Amir Aryani	72	people	devices [2]	-	-	-
2	Participant	Merja Bauters	55	work [3]	use [2]	people	-	-
3	Participant	Gordon Bell	64	body	lifetreks [2]	-	-	-
4	Participant	Samir Bhowmik	84	future [2]	certain	world [3]	choice [4]	-
5	Participant	Leigh Blackall	52	educational [2]	video [3]	issues [4]	use	-
6	Participant	David Blackall	52	technologies	built [2]	doing [3]	actual [5]	needs [4]
7	Participant	Simon Brown	71	skills [3]	device	job [2]	change [4]	-
8	Participant	Mat Brown	49	things	take [2]	mobile [3]	Google [4]	Number [5]
9	Participant	Tim Burns	52	Facebook [4]	control	look [2]	moment [3]	life [5]
10	Participant	Niamh Caprani	82	information [2]	lifelogging [3]	people	levels [4]	-
11	Participant	Roger Clarke	62	person	things [1]	time [2]	use [3]	-
12	Participant	Andrew Clement	56	increasingly [1]	people	ways [2]	hidden [3]	-
13	Participant	Michael Coghlan	69	people	things [3]	needs [2]	-	-
14	Participant	Chris Davies	76	device [2]	people	interesting [3]	-	-
15	Participant	Nikola Danaylov	82	time	people [2]	alternative [3]	-	-
16	Participant	Kiwi Wearables	57	research [2]	data	design [3]	value [4]	-
17	Participant	Eva Durall	58	technology [2]	recording [4]	things	data [3]	sense [5]
18	Participant	Interviewee 18	56	technology [2]	device	private [3]	subject [4]	-
19	Participant	Cathal Gurrin	43	understand [2]	technology [3]	data	cases [4]	time [5]
20	Participant	Clive Harfield	62	information [3]	body-worn [4]	computer [2]	learning [5]	use
21	Participant	Ori Inbar	70	context [2]	people	IEEE [3]	-	-
22	Participant	Ryan Janzen	69	people	human [2]	things [3]	-	-
23	Participant	Larry Johnson	78	school [3]	technology	wearable [2]	-	-
24	Participant	Martin Kallstrom	64	believe	possible [2]	need [3]	-	-
25	Participant	Tarmo Toikannen	86	use [2]	time [3]	Facebook [4]	idea	-
26	Participant	Teemu Leinonen	63	wearable [3]	aware	research [4]	things [2]	phone [5]
27	Participant	Geoff Lubich	47	use [2]	computer [3]	people	things [4]	police [5]
28	Participant	Deitmer Ludger	72	technologies [2]	things	computer [3]	email [4]	-
29	Participant	Rob Manson	82	things	AR [2]	perception [4]	ISMAR [3]	-
30	Participant	Scott S. Mathews	44	device [4]	technology	doing [2]	location [3]	police [5]
LEGEND		ORDER	[#]	PRIMARY CONCEPT		SECONDARY CONCEPTS		

Table 24. Topical Concept Maps (ID # 1-30)

ID	TYPE	COLLECTION	%	CONCEPT	CONCEPT	CONCEPT	CONCEPT	CONCEPT
31	Participant	James Neil	53	education [4]	potential [2]	probably [3]	things	-
32	Participant	Nick O'Brien	52	people	camera [2]	things [3]	future [4]	time [5]
33	Participant	Scott O'Brien	71	education [3]	wearable [4]	people [2]	world	-
34	Participant	Glenn Payne	78	learning [3]	use	probably [2]	source [4]	-
35	Participant	Christine Perakslis	71	uncomfort. [3]	risk [2]	students	-	-
36	Participant	Jeremy Pitt	77	people	course [2]	-	-	-
37	Participant	Simon Pockley	59	people [3]	things [2]	information	sense [4]	-
38	Participant	Jeff Porten	63	government [2]	technology [3]	privacy	happen [4]	-
39	Participant	Interviewee 39	61	becoming [2]	digital	technology [3]	-	-
40	Participant	Jukka Purma	52	understand [2]	people [3]	things	used [4]	event [5]
41	Participant	Simon Randall	61	use [2]	people	pictures [3]	-	-
42	Participant	Peter Rawsthorne	43	location [4]	appliance [2]	body	device [3]	-
43	Participant	Stephan Ridgway	81	government [3]	networks	technology [4]	human [2]	-
44	Participant	Tom Worthington	72	need [4]	research [3]	location [2]	use	-
45	Participant	George Siemens	77	activities	social [2]	things [3]	-	-
46	Participant	Colin Simpson	54	audio [2]	need	doing [3]	world [4]	-
47	Participant	Vance Stevens	67	people	teaching [2]	looking [3]	doing [4]	-
48	Participant	Erik Stolterman	39	computation [3]	technology [4]	wearer	design [2]	aspects [5]
49	Participant	Liz Swan	67	classroom	technology [2]	-	-	-
50	Participant	Interviewee 50	70	different [3]	computer [2]	devices	-	-
51	Stakeholder	Business Intel.	76	computing	network [4]	body [3]	use [2]	-
52	Stakeholder	Digital Cultures	70	technology [2]	people	information [3]	-	-
53	Stakeholder	Invention	64	people	research [4]	location [3]	data [2]	-
54	Stakeholder	Social Comment.	74	surveillance [4]	privacy [4]	system [3]	use	-
55	Stakeholder	Learning Design	75	people	student [2]	data [3]	-	-
56	Stakeholder	Business Develop.	56	time [2]	people	wearable [3]	photos [4]	feel [5]
57	Stakeholder	HCI	89	information [2]	life [3]	people		
58	Stakeholder	Policy & Reg.	83	camera	things [2]	use [3]	data [4]	-
59	Stakeholder	All Stakeholders	68	use [2]	people	time [3]	-	-
60	Event	ISTAS13 Symp.	67	computing	reality [2]	privacy [3]	-	-
LEGEND		ORDER	[#]	PRIMARY CONCEPT		SECONDARY CONCEPT		

Table 25. Topical Concept Maps (ID# 31-60)

3.0 EMERGENT THEMES

Figure 27 provides a comprehensive overview of the themes derivative of conceptual clusters, field notes, Research Journal Summary and in examination of 6.2:

Emergent Topics and 6.3: Emergent Themes. The table following the presentation of this figure provides direct attributions and correct acknowledgements of the concepts used to compose Figure 27. *Stakeholder Conversations: Emergent Themes*.

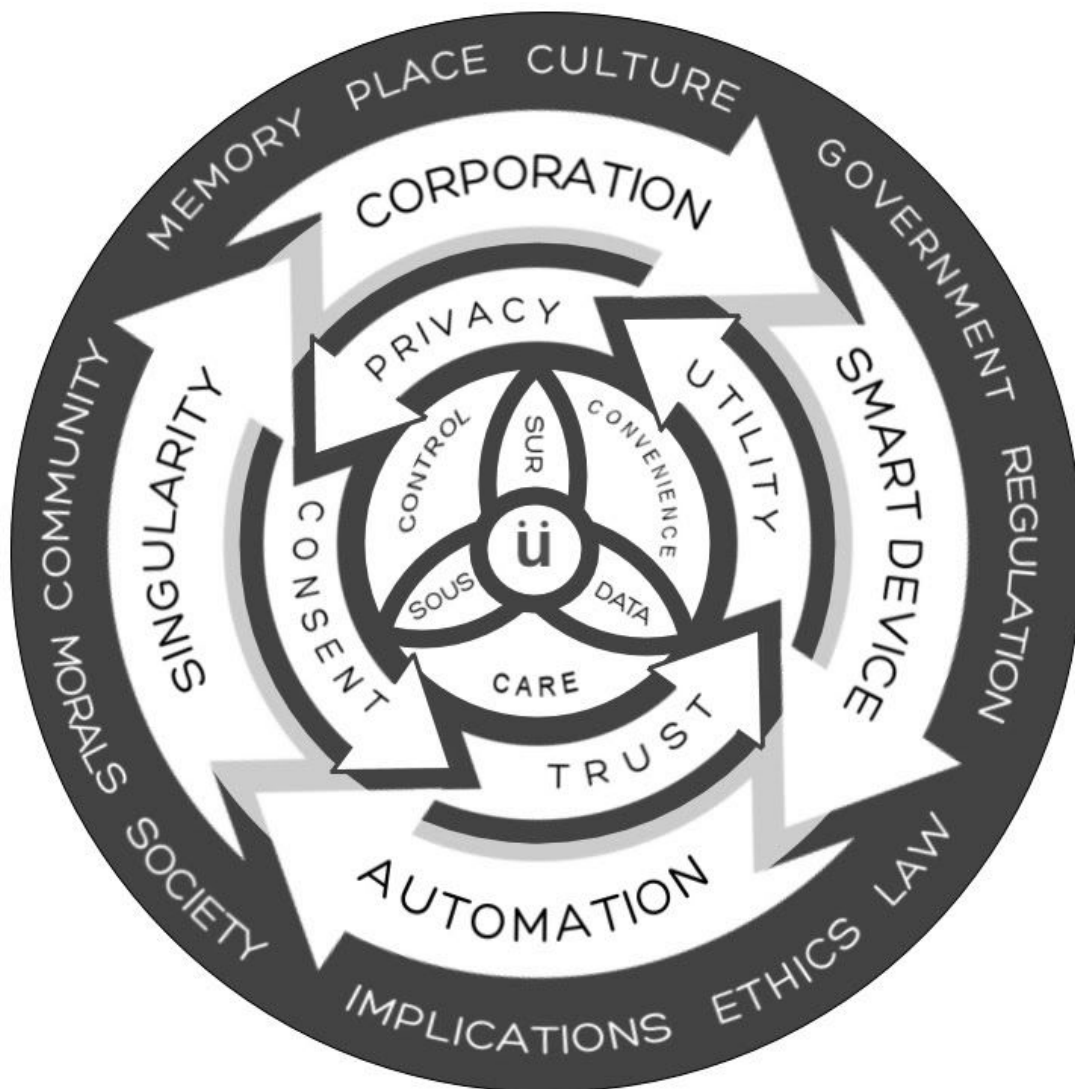


Figure 27. *Stakeholder Conversations: Emergent Themes* incorporating Layer 1 (Clark, 2014; Marx, 2015; Mann, 2016; Clarke, 2014; Hayes, 2010); Layer 2 (Masters, Michael, 2005), and emergent themes as Layer 3 (Hayes, 2019); Layer 4 (Hayes, 2019) and; Layer 5 (Hayes, 2019).

Layer	Dimension	Attribution
1	'Uberveillance'	Michael, M.G., 2014. From Dataveillance To Uberveillance. In K. Michael & M. G. Michael, eds. <i>Uberveillance and the Social Implications of Microchip Implants: Emerging Technologies</i> . IGI Global, pp. 1–17. Accessed, 8 March, 2020. https://www.igi-global.com/book/uberveillance-social-implications-microchip-implants/76728 .
1	'Surveillance'	Marx, G., 2015. Surveillance Studies. In <i>International Encyclopedia of the Social & Behavioural Sciences</i> . Elsevier Ltd., pp. 733–741. Accessed, 8 March, 2020. http://dx.doi.org/10.1016/B978-0-08-097086-8.64025-4 .
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4	'Singularity, Corporation, Smart Device, Automation'	Hayes, A. (2019) PhD Stakeholder Emergent Themes. Accessed, 8 March, 2020. https://doi.org/10.6084/m9.figshare.8295143 .
5	'Implications, Ethics, Law, Regulation, Government, Culture, Place, Memory, Community, Morals, Society'	Hayes, A. (2019) PhD Stakeholder Emergent Themes. Accessed, 8 March, 2020. https://doi.org/10.6084/m9.figshare.8295143 .

Figure 27. Stakeholder Conversations: Emergent Themes, attributions and acknowledgements.

It is important to note, previous iterations of schematic outlines show interrelatedness of these concepts and topics as they emerge from each prior context, yet this figure now highlights emergent themes derivative of grounded theory in:

- Layer 3 - Privacy, Consent, Trust, Utility;
- Layer 4 - Corporation, Smartphone, Automation, Singularity;
- Layer 5 - Implications, Ethics, Law, Regulation, Government, Memory, Place, Culture, Community, Morals, Society.