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**The Techno-centred Imagination:  
A Multi-Sited Ethnographic Study of Technological Human  
Enhancement Advocacy (THEA)**

By

James Michael MacFarlane

A thesis submitted in partial fulfilment of the requirements for the  
degree of Doctor of Philosophy in Sociology

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## List of Abbreviations

AI	Artificial Intelligence
AGI	Artificial General Intelligence
BCI	Brain Computer Interface
CEO	Chief Executive Officer
CPPL	Church of Perpetual Life
ExI	Extropy Institute
GATHE	Groups Advocating Technological Human Enhancement
GE	Genetic Engineering
HGH	Human Growth Hormone
IBM	International Business Machines
ICT	Information and Communication Technology
IEET	Institute for Ethics and Emerging Technology
LF	London Futurists
LSE	Longevity Escape Velocity
MILE	Movement for Indefinite Life Extension
MIT	Massachusetts Institute of Technology
MST	Mass Society Theory
NSMT	New Social Movement Theory
NNI	National Nanotechnology Initiative
NYC	New York City
QDAS	Qualitative Data Analysis Software
ProP	Proactionary Principle
RMT	Resource Mobilisation Theory
SMFT	Social Movement Framing Theory
SMO	Social Movement Organization
STS	Science and Technology Studies
TCI	Techno-Centred Imagination
tDCS	transcranial Direct-Current Stimulation
THE	Technological Human Enhancement
THEA	Technological Human Enhancement Advocacy
TPG	Transhumanist Party Global
TPUK	Transhumanist Party UK

TPUSA	Transhumanist Party USA
TTT	Theologians Testing Transhumanism
USA	United States of America
VDP	Virtual Distributed Parallel State
WTA	World Transhumanist Association

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For my parents, whose love, encouragement and support throughout my education has been without bounds.

## Declaration

I confirm that this thesis is my own work and has not been submitted for a degree at another university.

During the period of registration, I have presented findings at two conferences, however, none have appeared in publications.



## Abstract

This thesis explores the social construction and performance of Technological Human Enhancement Advocacy through multi-sited ethnographically inspired participant observation across a range of sites. It argues that advocacy efforts surrounding the ideal of technological human enhancement share the ideational feature of *Techno-centrism* – an object-level belief embedded in the material present while simultaneously future-oriented and thus principally immaterial. This purposive neo-dualism blurs ‘real’ and ‘imagined’ futures to satiate the materialist ontological grounding associated with the scientific worldview, while granting extended licence to more indulgent, compelling visions for technology as an enabler of affirmative, forward-facing action – including revivifying pursuit of humanist ideals associated with the modernisation project. The thesis makes contributions to three areas. Firstly, in substantive terms, it contributes towards sociological knowledge by detailing the intersubjective values, semiotic framing mechanisms and narrative tropes evoked to both justify and promote the notion of Technological Human Enhancement Advocacy (THEA), an area which remains under-researched.

Secondly, the thesis makes a theoretical contribution through its modelling of a non-spatially determined constant which recurs across sites associated with THEA: *The Techno-centred Imagination* (TCI). Finally, the thesis offers a methodological contribution through its novel and creative application of multi-sited research strategy for the study of non-spatially determined cultures of extreme support for science and technology. A 24-month programme of fieldwork was undertaken, comprising multi-locational participant-observation, interviews and surveys. The thesis concludes that far from being new, the emerging social forms associated with THEA capture ambivalences which have long cast a shadow over late-modern society and culture. Although TCI appears most pronounced in the practice of transhumanism – where it is acted out in extreme, almost hyperbolic ways – the phenomena mirrors broader concerns around the future of science, technology and human self-identity in the new millennium. As such, it is deserving of further study.

## The *Trans*-Human Condition: Science Slightly Over the Edge?

*“...It's a doctrine of self-transformation, of extremely advanced technology, and of dedicated, immovable optimism. Most of all, it's a philosophy of freedom from limitations of any kind... There hasn't been anything like it – nothing this wild and extravagant, no such overweening confidence in the human prospect – since way back to those bygone ages when people still believed in things like progress, knowledge, and - let's all shout it out, now - Growth!”*

**ED Regis, *WIRED* Magazine, [01.10.1994]**

When ED Regis penned the above for WIRED Magazine he captured the eruption of hope and excitement apparently ushered-in by the arrival of a new philosophical movement which appeared unshakably familiar. In the decades which followed, scientific and technical advances led to an unprecedented questioning of dominant doctrines concerning the human condition, yet fledgling social formations organised around this prospective technological re-negotiation of humanity remained under-researched sociologically. While journalists and other interested commentators operating within the popular media have offered periodic coverage of such developments, scholarly attention has been comparatively sparse. This study is intended to redress this balance. The introductory chapter opens by outlining the background for the research, tracing a brief chronological history of the novel social-cultural and philosophical forms currently travelling under the rubric of *Transhumanism*: undoubtedly the boldest and most unabashed variant of technological human enhancement advocacy (THEA) circulating today. It proceeds to discuss the intricate associated politics emerging, as the movement attempts to gain size and garner increasingly mainstream political traction in the current period. Next, it offers an account of my motivations for the project and clarifies the distinctive contributions of the work toward existing debates. In this regard, I stress the importance for scholars to engage seriously with the emerging social, cultural and political forms opening around ambitions for technological human enhancement

in the 21st century. Finally, it closes with an outline of the thesis structure, indicating how the chapters to follow will contend with this challenge.

## 1.1 BACKGROUND FOR STUDY

Two key descriptors have come to gradually gain increased currency within academic circles over the last some thirty years: *Transhumanism* and *Posthumanism*. Although widespread conceptual confusion persists between the two terms, generally it is accepted that the former signifies an intensification of Enlightenment humanist thought, while by contrast the latter typically denotes normative distancing from the canons of violence and subjugation associated with the humanist project. The emerging ideological schism between the twin-vectors of transhumanism and posthumanism is the most recent manifestations in a long series of marked historical ambivalence toward the question of what it means to be human. In this sense, the new movements can be seen to have commonality in so far as that they both appear to be streaming *beyond humanism*, and apparently share an interest in human *co-evolution* with technologies (Ranisch and Lorenz Sorgner, 2014: chp 1). This study arises against this backdrop as an effort to investigate the emerging interspersed social-political movement(s) currently operating under and around the banner of transhumanism through engaged empirical investigation. The research employs multi-sited participant-observational methods, qualitative interviews and surveys to form a detailed account of transhumanist ambitions and operations as they are envisioned and enacted by those associated with the cause. The study set out to address the following core research question: *How can Technological Human Enhancement Advocacy (THEA) be characterised across a range of the locations where the practice is found?* To adequately address this question, it was appropriate to formulate the following related sub-questions:

- A) *Who are the constituents of THEA? What kind of boundaries are evoked by this constituency, how are they maintained?*
- B) *What kind of specific goals might THEA be working toward?*
- C) *What kind of political beliefs or belief-systems are associated with THEA?*
- D) *What kind of existential beliefs and belief-systems are associated with THEA?*

In pursuing satisfactory responses to these questions, the research adds novelty to the fields of Science and Technology Studies (STS) and New Social Movement Theory (NSMT) through its creative purposing of the multi-sited ethnographic approach for the study of radically pro-science and technology advocate communities. My motivations for conducting a research project of this kind primarily stem from a wish to understand better the various social, cultural and philosophical forces which drive contemporary hopes, dreams and aspirations for new technology to act as an agent of radical human self-transformation, as exemplified in transhumanist philosophy. Ultimately, I wished to deconstruct the technologically focused visions of transhumanists to identify how – and specifically under what psychological, social and cultural conditions – such belief systems emerge, and the various intersubjective sources of motivation and continual legitimation which advocates use to advance the pursuit of technological human enhancement. This focus, I hoped, would enable me to understand how enhancement focused technological expectations come into being, and why despite criticism and dissuading evidence, these elaborate visions continue to inspire new subcultural forms which mark the contemporary world. Beyond these personal motivations, given the rising level of academic interest in both transhumanism and posthumanism, there is also a significant disciplinary cause to research this space. I will now discuss my intellectual motivations for the project.

## 1.2 MOTIVATIONS / KEY CONTRIBUTIONS

### *Motivations*

This research is timely and contributes to sociological knowledge in ways that will be of significance for the future study of new social movements formed around technological human enhancement, and broader subcultures of radical support for techno-science. At present, the transhumanist movement represents a rich site – inhabiting a unique social space at the intersection between technology, science, politics and twenty-first-century media dynamics – which remains under-researched. The key themes emerging from the study range from questions of self-identity in

hyper-technological societies, post-industrial techno-philia, and the networked mobilisation of non-spatially determined communities of thought. My chief motivation to produce this study comes from an interest in the highly persistent techno-*utopian* – or at least techno-*utilitarian* – thinking residual within late-modern cultures, as some continue to believe the ever-ambitious strategic application of science and technology might be used as a bootstrap to radically surpass or supplant existing social, political and economic schema. Over the last quarter-century, transhumanism has then come to represent an enduring set of techno-optimistic ideas surrounding the future of humanity, with its advocates seeking to transcend limits of the body and mind according to an unwavering Enlightenment-derived faith in science, reason and individual freedom. To the tune of *progress* associated with this period in European history, transhumanists today are concerned with liberating humans from the present constraints to our being, with newly emerging technologies expected to provide means for as-yet latent capabilities to become more fully realised. While the sciences and technologies allied to the movement run the gamut from the existing and emerging to the outright speculative, all are equally celebrated according to their assumed potential to empower *Homo sapiens* over the natural contingencies of birth, life and death.

However, as Bard (2012) recognises, in addition to a determined belief in technological progress, transhumanism has also apparently inherited a range of problems and conceptual fallacies from the Enlightenment. On the surface transhumanism apparently resembles a kind of liberation movement, with transhumanists seeking to somehow emancipate humanity from the limitations of biology itself. In response, an array of critics within the modern Western Academy have attacked transhumanism and the ideas underpinning the movement on moralistic grounds. Perhaps most famously, in his 2002 text, *Our Posthuman Future* liberal economist and philosopher Francis Fukuyama described transhumanism as one of the world's most dangerous ideas (Fukuyama, 2002). Similarly, left-leaning German philosopher Jurgen Habermas has made the highly principled bioconservative case that embryonic genetic modification of the kind which transhumanists extol would undermine the moral autonomy of future generations (Habermas, 2003). Other academic commentators from the natural sciences – such as experimental polymer physicist Richard Jones – have dismissed the transhumanist

notion of technological transcendence on technical terms (Jones, 2016). Apparently unscathed such ethical and practical hang-ups, the movement seemingly pushes on with an almost millenarian fervour.

In addition to this external criticism, fractious divisions have also been reported across transhumanist groups, apparently born out of long-standing political tensions arising at the dawn of the modern period which have yet to be resolved. Speaking to this point, American Bioethicist James Hughes (2015) suggests present-day transhumanists have come to inherit all the same arguments about the value and meaning of liberty, equality and solidarity that divided their Enlightenment forebears. Such quintessentially modern political debates related conditions of life within present-day liberal democratic societies have been re-enlivened with a 'new' technologically-focused gloss by those who apparently believe in the limitless potential of *Homo faber*. No doubt, this rendering of humanity has a deep history which predates transhumanism, and has been the subject of long-running theoretical discussions in the philosophy of science and technology. The work of two influential theorists of technology should be noted as precursors to the project: Ernst Kapp and Lewis Mumford.

The study's underlying theoretical position follows the work of German philosopher Ernst Kapp (1808-1896) who suggested technology can be seen to represent an extension of the human nervous-system. In his early efforts to formulate a philosophy of technology, Kapp wrote on the notion of technology as organ projection -- an idea first outlined in his *Grundlinein einer Philosophie der Technik* (1877). Here, he raised the analogy between tools, organs and machinic networks, describing the rail-road as externalisation of the circulatory system (chp 7), and the telegram as an extension of the nervous system (chp 8). According to Kapp's analysis, such apparent morphological parallels between the organic body and technology are not always the result of overt conscious processes, but rather may be animated through covert desires concealed by the sub-conscious (chp 9). Ultimately then, Kapp's technically-orientated adaptation of Hegelian dialectic called for the technological colonisation – and ultimately transformation – of external natural environments, a move which he believed ought to be complimented by an inner colonisation of the human environment in the form of governance and politics. In

this sense, for Kapp, technological attempts at reconfiguring the external, physical world are coupled with other intersubjective colonisations, or attempts at purposeful development based within the domain of symbolic systems, such as language and semiotics. In his far-reaching and detailed account of the complex interplay between philosophy, geography and technics, Kapp's *Grundlinein* worked to formalise the conceptual framework necessary for analysis of technology as a projection of human mental-life, and canonised the idea that technological processes – as broadly construed, including semiotic and cultural constructs such as language and the state – could be understood as the externalisation of human nature. His theory of organistic human-extension was also the first to capture how systematic-technological ways of looking at the world apparently bleed into a range of traditionally non-technical domains, such as culture and politics. As such, this project takes inspiration from Kapp in its shared nexus of concern: not the material situation and effects of technology as a tool, but rather the symbolic, mental-psychic impulses and ideational systems which are found in tandem with technological ambitions and practices.

Moreover, the research also takes theoretical direction from one of Kapp's twentieth-century intellectual successors, worldly romanticist philosopher of technology Lewis Mumford (1895-1990) who built on the notion of technology as material extension of organic human embodiment, as well as the closely analogous manufactured quality of social and cultural orders. Particularly influential in this regard is Mumford's classic *Technics and Civilization* (1934) in which he spends the first two chapters expounding the psychological and cultural origins of technology (chps 1-2). Across this seminal work, Mumford offered a far-reaching analysis of the history of mechanical civilisation, explicitly by way of reference to his understanding of human temperament. After outlining what he took to be the core institutional and psychic sources of the machine, in the final portion of the text Mumford shifted his concern to the emergent results of such machinist obsessions, devoting the last third of his book to examining social reactions to technology. This comprehensive multi-faceted account of ideational cause and technical effect again set a new standard for the philosophy of technology in discussion of human values, highlighting the two-way flow between technology and culture – a complex dynamic which I argue should be seen as a core driver behind the transhumanist movement today. Further to this point, continuing the significance his earlier work granted to the subtler aspects

of human experience in determining both the social role and material format of technology, in *Art and Technics* (1952) Mumford notably contrasted art as the inner life of the mind with technics as power-manipulation of external objects. In a fashion clearly analogous to Kapp, here, through comparison between technical and artistic practices, he suggested technologies arise from – indeed, are made possible through – the manipulation of symbols, the likes of which he believed could to be expressed in ways which are either in accordance with or in divergence from human nature.

The project's central focus and overarching conceptual framework is then inspired, to a substantial part, by the interpretivist vein in the philosophy of science first outlined in *Art and Technics*, albeit with some clarifications offered by Mumford later in his career. Lastly then, in *The Myth of the Machine* (2 vols., 1967: 1970) Mumford expanded on his early work, directing attention to the role of subjectivity in the process of knowledge formation, and meditating on how this interpretive quality has influenced the sum of human development over time. Across these two volumes, Mumford clarifies and advances the conclusion already eluded to in his earlier texts, that humanity should be properly understood not as *Homo faber*, but as *Homo sapiens*. In *The Myth*, he meditated on interpretative power as it flows across the terrain of subjectivity, arguing the vehicle of interpretation has been of foremost importance to human achievement, particularly as expressed through language: Mumford's analysis upholds that otherwise primitive practices of tool-making were radically modified by the introduction of linguistic symbols, aesthetic designs, and socially transmitted knowledge. On this point, he suggested that it is through our manipulation of symbolic culture, that the human being “is pre-eminently a mind-making, self-mastering, and self-designing animal” (1967: 9). To put it another way, as Mitcham (1994), neatly summarises, Mumford ultimately determined it was not making but *thinking*, not the tool but the *mind*, that is the basis of humanity (42).

The research takes the above provocation seriously, and shares this concern for the apparent close proximity between human nature, psychology and symbolism as they compound in technical projects geared toward human development. In other words, to use Kapp's model, it investigates contemporary efforts at transforming external and internal environments through new social movement type organisations built around the nuanced domains of culture and politics in the twenty-first century. It



proceeds with the conviction that the present state of transhumanist affairs is a yet under-developed space for normative-empirical investigation, the likes of which can meaningfully extend contemporary discussions on the topic of emerging science and technology in novel ways. Simply put, even if transhumanist hype surrounding the apparently monumental upcoming technical developments turns out to be overstated, the rich social formations based on the ideal of human enhancement by technological means still have much to tell us about the intersubjective nature of science, politics and human self-identity in the current period.

On the other hand, if taken seriously, besides the previously stated points of moral-ethical controversy, the transhumanist agenda also carries a range of social and economic implications. Not least, as Fuller (2011: chp 3) suggests, under current neoliberal orthodoxy new technological means may perhaps soon become available for some individuals to gain a competitive advantage in the labour market, thereby gradually shifting societal standards of performance upwards. Moreover, with the anticipated advent of Artificial General Intelligence (AGI) some believe advanced-AGI's could replace human labour altogether within some sectors in the decades to follow (Baum et al., 2011). These hypothetical transhumanist scenarios give rise to important sociological questions around social justice, the role of government, and the future of work. As such, it is highly relevant to investigate the new communities and fledgling political formations actively contending with these concerns in the interest of gaining insight into how such matters of significant normative import are managed in situ. Through ethnographically-inspired empirical study across the communities associated with transhumanism it has been possible to elicit and theorise the social, ethical and economic dimensions to the movement, and with it gain an in-depth perspective on how distinct uses of symbolism and narrative around science and technology and politics are developing in the present-day. In effect, this research project has furthered understandings of new twenty-first-century technologically-inspired social movements, and advanced social research into dynamic, non-spatially confined communities of thought. For the sake of clarity, I will now recall the study's primary contributions toward contemporary debates.

### *Key Contributions*

So-called new social movement theory (NSMT) developed in the period since the 1960's has recognised how recent social movement mobilisations have become increasingly focused on issues of identity and quality of life. This move corresponds with the current convention for NSMT scholars to view pull-factors attracting participants toward social movement activity as potentially both rational and strategic, as well as psychologically and emotionally motivated. Simply put, this study works to build an in-depth, normatively focused and empirically supported account of transhumanism – which appears to resemble a heavily scientised (Hayek, 1952; Sorell, 1991) 21st-century identity movement. To this end, I use a range of qualitative inputs to build a detailed account of the actors, framing mechanisms and other intersubjective symbolic motivational strategies which are evoked to legitimate and ultimately forward the scientific-technical schemes associated with technological human enhancement and its socially-based advocacy. As such, the study emerges at the apex between social movement theory and science and technology studies.

From this theoretical starting point, my research was designed to use embodied participatory observational practices in combination with qualitative interview and survey methods to tell the story of transhumanism. In the first study of its kind, this ethnographically-inspired methodological approach enabled me to combine thick descriptions, vivid imagery captured at field locations, and first-hand accounts offered by human enhancement-focused technology advocates – to elucidate and give voice those involved in the human enhancement scene. In addition to forming a sophisticated understanding of the array of technical prospects and expectations which sympathetic proponents take to surround technological human enhancement, the project has also explored how various social mobilisations are operationalised and justified by the actors engaged in such practices. Using descriptive data gathered through interviews and surveys, I have examined in detail how advocates believe their social movement type-activism and advocacy efforts will contribute toward the realisation of the different ambitions associated with THE. Through the purposeful handling of an array of qualitative data gathered from a range of field locations, I formed a multi-dimensional account of the various factors which comprise and influence the world-view of those who inhabit the plethora of both physical and

virtual spaces associated with the promise of radical human self-transformation through technology. The analytic chapters work to integrate a range of primary and secondary sources to capture and theorise around the apparently distinctive social, operational and onto-existential tenets associated with the transhumanist movement and other eclectic THE efforts: In this respect, the study offers a yet unprecedented exploration of how advocates and advocacy groupings use the interactionist foci of semiotics, framing and narrative in the context of mobilisation around THE. In sum, speaking from a theoretical standpoint formed with influence from both the symbolic interactionist and realistic constructivist traditions, I suggest the expectation of continual betterment to circumstances of human existence via the pursuit of science and technology represents a compelling trans-locational collective action frame, the likes of which has apparently proven itself remarkably enduring throughout the modern period. On this point, the grand-narrative of self-transcendence through harnessing mental faculties with the assistance of technology is notably taken, at least by some advocates, to represent a sacrosanct feature of human self-identity.

Ultimately then, by formalising and theorising the crucial features which comprise technological human enhancement advocacy – amounting to an *ensemble* which I call the *Techno-centred Imagination* (TCI) – it has been possible to establish an ideational constant through tracking and analyse the multiple various embodied manifestations of a complex belief system. In this regard, another notable contribution has also been in the area of qualitative social-scientific methodology, where I have provided a working test case for the use of the multi-sited ethnographic research strategy in the study of highly speculative science-related social movements. While multi-sited ethnography is currently in vogue within Science and Technology Studies (STS), due to the fields current object-centrism the full potential of this technique has only been tentatively explored to date. Existing analyses of science and technology using the multi-sited approach have typically tended to focus on the social context of techno-scientific knowledge production practices (i.e., inspired by Jasanoff, 2004), or the instantiation of technology across different sites (i.e., de Laet and Mol, 2000). By contrast, this study uses multi-sited principles to critically examine the altogether more nebulous culture and politics surrounding radical science and technology advocacy in the contemporary period, demonstrating

that the method can – and should – be productively applied beyond technological materialisms to explore more immaterial, ideationally-based domains of concern.

In this respect, the study contributes much toward contemporary methodological debates in STS by successfully expanding the remit of the multi-sited research approach to examine cultures of support for prospective human enhancement focused applications of emerging science and technology. To this end, it borrows some inspiration from the theoretical lenses developed in social movement studies – especially those analytic approaches influenced by symbolic interactionism – to elicit the range of framing mechanisms, motivational systems, and narrative tropes associated with technological human enhancement advocacy. It uses qualitative analysis to examine how geographically dispersed actors and groups are mobilised – achieving a level of trans-locational commonality – by adherence to a shared ideational system: the TCI. This belief system then apparently provides THE advocates with an enduring source of motivation and legitimation heavily imbued with framing and narrative devices based-on long-standing normative-onto-epistemic assumptions associated with the humanist tradition. In summary, the study formally defines and advances the emerging nexus between social movement theory and normative science and technology studies, an area which I believe will grow in scholarly significance in the years to follow. Moreover, its design and execution provides a useful case-study detailing the merits and limitations of using multi-sited methodological strategy to advance knowledge and understandings in this space.

### 1.3 OVERVIEW OF THESIS

The remainder of the thesis is structured as follows. The next chapter (2) *Moving Beyond Humanism* consists of a review of relevant literature around social movement theory, an array of internal/external accounts of the transhumanist movement, and other eclectic material relevant to the study. It reviews work addressing the incidence of optimistic/utopian motivation-systems surrounding science and technology – including the notion of science as a social movement. The chapter reveals the novel standing of transhumanism, which has a both normatively-laden and trans-locational quality, having circulated over a diffuse global area in

recent years, made possible through the technologies of information and communication which have emerged over the last some three decades or so. As such, it concludes that effective study of the inceptive social forms associated with the transhumanist movement requires development of a dynamic research strategy which moves to adequately capture the nuances of cultural meanings, objects, and identities as they travel across time and space. Chapter (3) *Methods and Methodology* then outlines how the project undertakes this challenge, detailing the study's research design and methodological choices. To this end, the chapter begins by recalling the conceptual framework which was adopted, providing theoretic justification for the multi-sited approach. It then proceeds to present a description of the key activities which comprised the data gathering portion of the study, and the research principles which guided analysis. The following chapter (4) *Constituents* is the first analytic/presentation of data chapter, which sketches out some preliminary demographic features of THE advocates and advocacy groupings encountered while moving across locations in the field. This chapter outlines some common social variables apparently common among those I met in spaces associated with THEA, as well as accounts offered by actors regarding the levels/forms of enhancement advocacy they had encountered themselves. Finally, it examines the socially constructed boundaries THE advocates evoked to limit or restrict access to groups organised around this objective.

Next, the second analytic chapter (5) *Mobilisations* presents a detailed account of the various objectives and strategies for action which were found associated with technological human enhancement. I split the presentation of these findings between, on the one hand, those technical visions which I found centred on the prospect of THE, versus on the other, the social-cultural-politically based ambitions which I found assigned to THEA. It reflects on how advocates were engaged in efforts to formally capture and systematise the technical and social activities emerging in the space opening-up around human enhancement advocacy. Perhaps unsurprisingly, these efforts often centred around the use of information and communication-based apparatus such as new wiki-media, and other social media type online-based platforms. The chapter closes with a discussion of how apparently European Enlightenment-inspired teleological-assumptions – especially those around the supposedly transcendent status of applied human reason – guide the mobilisation of

projects associated with THEA. Building on this normative-programmatic theme, chapter 6 *Politics*, recalls the various orientations toward political processes and the political status quo reported to me by respondents through interviews and surveys. It summarises the political outlooks and sympathies I encountered over the course of the study, which tended to be underscored by a strong valorisation of individual freedom and significant scepticism toward modes of governance via centralised authority, or mainstream – i.e., party political – liberal-democratic processes.

The remaining analytic chapter (7) *Existence* proceeds to recount the various existential claims and assumptions which I found associated with THEA. This chapter opens by exploring the attitudes towards theism which were relayed to me by THE advocates, and proceeds to reflect on how some particularly elaborate forms of advocacy appeared driven by a strategic combination of rationalism and faith. The chapter closes suggesting that, on an existential level, transhumanism represents an attempt to tactically resolve deep-seeded cultural ambivalences towards death in the post-secular era. Finally, Chapter 8 *The Techno-centred Imagination* concludes by revisiting the core thesis themes, providing some reflections on the experience of multi-sited study as it unfolded in the context of the project, and putting forward some recommendations for further research in the spaces surrounding advocacy for technological human enhancement. Ultimately, the thesis closes with the claim that while THEA is performed in a range of settings, across such varied locations, sympathetic actors are unified by the highly pragmatic psychological-emotional impulse to assign primacy to science and technology as the means to purposefully reform biological, social and environmental conditions of human life. In sum, the chapter argues the TCI is a purposive neo-dualism which intentionally blurs ‘real’ and ‘imagined’ futures to satiate the materialist ontological grounding associated with the scientific worldview, while granting extended licence to more indulgent, compelling visions for technology as an enabler of affirmative, forward-moving action – including revivifying pursuit of humanist ideals associated with the modernisation project. This fundamentally positive, future-facing motivational-ideational system – assembled intersubjectively – represents a rich subcultural phenomenon set to become increasingly important to pro-science/technology discourses in the years to come. As such, it is deserving of further study.

## 2

### Moving Beyond Humanism

*“You know the scene. Social structures the world over are melting down and mutating [...] The emperor of Technoscience has achieved dominion, though his clothes are growing more threadbare by the moment, the once noble costume of Progress barely concealing far more wayward ambitions.”*

**Erik Davis, *Techgnosis* [1994]**

At roughly the same time ED Regis was giving voice to the enthusiastic first-flush of transhumanists in the pages of *WIRED* Magazine, other commentators writing on the West-coast reflected on the apparently aggrandised status of technology in the late modern world in far more ambivalent terms. On a certain level, such dichotomisation neatly captures a discordant undertone to the transhumanist agenda. This study is motivated by the idea that transhumanism — which currently stands as a loosely-organised form of collective action — resembles a social movement centred around Technological Human Enhancement Advocacy (THEA). To understand how this characterisation might be made, and appreciate how transhumanism can be productively analysed as such, it is necessary to identify and review the corpus of literature around social movement theory (SMT) as well as other relevant work which has examined pro-science and technology subcultures. Defining what exactly comprises a social movement can be challenging, as many scholars have found. De la Porta and Diani (2006) suggest a social movement is an informal set of individuals and groups that are "involved in conflictual relations with clearly identified opponents; are linked by dense informal networks; [and] share a distinct collective identity" (20). According to this perspective, social movements represent organised yet informal social entities involved in some form of extra-institutional conflict-oriented toward a specific goal (Christiansen, 2011: 15). In the interest of establishing transhumanism's conformity and novelty under these criteria, it is appropriate to outline the types of social movement and approaches toward their study developed to date, offer a sufficient history of the transhumanist movement,

and critically appraise existing work theorising belief systems and subcultures formed around the idea of human enhancement through technology.

This chapter divides into three sections. The first section opens situating the study within the body of contemporary social movement theory (SMT). It recalls key developments in SMT which are of relevance to the research, particularly the transition to new social movement theory (NSMT) which has occurred since the 1960's, alongside a resurgence of interest in psychological-emotional explanations of social movement activity. Following this trend, analytic attention has been drawn toward the symbolic-intersubjective structures evoked through social movement participation – which may be potentially accessed and discerned by researchers using constructivist modes such as framing theory and narrative analysis. Next, the second section offers a concise history of the transhumanist movement, providing an etymology of the term transhumanism and raising the complexity between internal vs external histories of transhumanism's origins. In this account, I suggest social movement activity around transhumanism has been marked by a trend toward rising politicisation in recent years, culminating in chequered attempts to gain mainstream political traction for transhumanist ideas via formation of political parties in Europe and North America.

Finally, the third section reviews the activities of specific transhumanist social movement organisations (SMO's) formed in the twenty-first century, and proceeds to draw together relevant work directly theorising the ideational drivers behind science and technology support and optimism in the recent past. This section reviews critical commentary on techno-utopian perspectives toward emerging science and technology, the symbolic significance of science, and the suggestion that science itself might represent a social movement. Ultimately, the chapter finds existing literature in the technological human enhancement advocacy space is polarised between theoretically-based accounts of transhumanist scenarios, often charitably produced by transhumanists themselves, versus other critical commentaries on the excesses of technologically deterministic thinking – often produced by journalists or academic media theorists writing in the context of information and communication



technology (ICT). As such, there is great need for critically-minded direct empirical engagement with human enhancement advocates to explore in more comprehensive terms how their technology-embracing identities, visions and activities are constructed and enacted in practice.

## 2.1

### Self-Identity, Framing & Narrative in 'New' Social Movement Theory

In the broadest sense, social movement theory (SMT) refers to a body of interdisciplinary theory concerned with the study of social mobilisation including its social, cultural, and political manifestations and consequences. Social movement activity closely follows the rise of democratic representation in England and the United States in the late eighteenth century, and as such social movements are associated highly with democratic societies (Christiansen, 2011a). As the industrial revolution gave rise to the rapid spread of both capital and workers across geographic regions, it brought with it significant changes in political, social and work environments. Correspondingly, Sociologist Lorenz von Stein introduced the term social movement in his text *The History of the French Social Movement from 1789 to the Present* (1850). At the time of von Stein's publication within mid-nineteenth century *bourgeoise*-industrial society, early forms of social movement (displaying key features such as collective identity, press attention, leadership, membership, and collective action) were becoming increasingly popular in Europe and North America. As such, Flynn (2011b) suggests social movements have then generally tended to be most successful in open, democratic societies in which social mobility and social change are accepted concepts (27). Despite this general tendency, some social movements relate to the process of democratisation itself, and so may be present within authoritative societies (Tilly, 2004). In this sense, Social movements apparently occur under a variety of socio-cultural conditions and reflect a diverse range of aims and objectives. This section opens with an overview of so-called new social movement theory (NSMT), a notable theoretical trend arising in the period since World War 2 corresponding with a broadening of social movement

activity away from mobilisation around economic disenfranchisement, and instead toward issues of personal identity. It proceeds to define three strands of NSMT which are particularly relevant to the study of contemporary social movements: framing theory, narrative analysis and the ARRR model. These theoretical approaches — geared toward evaluating both the symbolic and programmatic features of movement involvement and activity — are pertinent to the study of transhumanism as a social movement.

*‘New’ Social Movement Theory:  
A Post-War Paradigmatic Shift toward Identity*

Early models of social movements rooted in mass society theory (MST) sought to provide an interdisciplinary critique of the distinctive forms of collective identity which had arisen during the industrial era's processes of industrialisation, urbanisation and changing political regimes. According to the initial wave of SMT developed in the late nineteenth century, new forms collective action — at that time, typically manifested through labour unions and worker collectives — were inherently oriented toward *change*. As Flynn (2011c) recounts, mass society models suggested rapid changes associated with industrialisation had created new urban politically and psychologically “unmoored masses” (79) — comprised of uprooted and increasingly isolated individuals — who were highly vulnerable to new forms of demagoguery and manipulation by the media (Hamilton, 2001). In this sense, mass social movements were taken to mobilise those alienated from the going system, who reject the legitimacy of the established order and thus are ready to engage in efforts to destroy it (Kornhauser, 1959). According to this framework, societies with decentralised political economies appear most vulnerable to massification due to vacuums created by declining participation in religious organisations, unions, political parties and voluntary associations (Flynn, 2011c) — with mass media stepping in to fill the void (Kreisler, 2002). Building on the social-psychological grounding of MST, later models — i.e. social strain theory in the 1930's (Weeber & Rodeheaver, 2003) and relative deprivation theory in the 1950's (Morrison, 1971) — continued to focus on the psychological pull-factors attracting individuals toward social movement activity. In these early theories, social movement support-bases

were seen as comprised of desperate and isolated individuals, assumed to partake in social movement activity out of personal emotional grievances (Fuchs, 2006) or maladaptation to the rapid social change brought by processes of modernisation. Under early mass society models focused on the industrialisation of modern societies — marked by the rapid disintegration of traditional social structures — it then became conventional for theorists to imagine social movement activity as underpinned by specific processes and following repetitive patterns. These forms were taken to develop sequentially, amounting to a social movement 'life-cycle'. Today, typically the four key social movement stages are known as *Emergence*, *Coalescence*, *Bureaucratization*, and *Decline* (Christiansen, 2011).

A major paradigm shift occurring within social movement theory from the 1960's onward saw the development of two distinct new areas of theorising: resource mobilisation theory (RMT) in North America and new social movement theory (NSMT) in Europe. These new trends broke from the otherwise dominant social-psychologically inspired theories of the time, and questioned the basic assumptions underlying the previous mass society, social strain and relative deprivation-based models of collective identity and action (Flynn, 2011d). Both emergent areas of thought emphasised how social movements had apparently evolved — alongside shifts in society and culture starting from at least the 1950's onwards — beyond their classical forms into increasingly complex professional operations, characterised by novel sets of ambitions, membership dynamics and organisational structures. Contrary to the presumed irrational basis of early mass behaviour models, within the framework of RMT social movements participation instead came to be viewed as rational behaviour, based on an individual's conclusions about costs vs benefits of participation, rather than born from a psychological predisposition of marginality and discontent (Klandermans, 1984). Moreover, within this model social movement success was suggested to be heavily influenced by group strategy, particularly that which is geared toward structural reform by garnering strategic political influence (Jenkins, 1983). From thereon, scholarly focus shifted toward the instrumental aspects of social movements, and the rational and organised ways movement campaigns are executed (e.g. McCarthy & Zald, 1977).

After instigating an initial break away from early twentieth century social-psychology based models of collective behaviour, resource mobilisation theory of the 1960's and 1970's was eventually itself supplanted by NSMT in the 1990's (Edelman, 2001). NSMT then, in keeping with the claims of RMT, attempted to further formalise how contemporary so-called new social movements have strategies, goals and membership bases distinct from traditional social movements. Commentators in the NSMT vein have suggested while classic social movements of the late nineteenth and early twentieth century were close-knit protest groups concerned with class conflict, more recent movements — associated with the latter twentieth century to the present — are far looser networks concerned with addressing forms of political and social conflict (Flynn, 2011b). Equally, they have noticed how today's movements also appear distinct according to the scale of ambition associated with their activities, with new social movements formations often mobilising to pursue change on a global scale — unlike the protest groups conventionally associated with traditional social movements, which tended to be local and devoted to single issues (Lentin, 1999). Simply put, the point of demarcation NSMT uses to distinguish between a traditional versus new movement is loosely analogous to the transition from industrial to a post-industrial society: While industrial society gave rise to movements addressing class conflict — through improving working conditions, rights and wages — by contrast, the post-industrial era has brought forth movements oriented toward addressing issues surrounding identity and quality of life (Inglehart, 1990; Melucci, 1995). The range of approaches toward the study of social movements has also evolved in line with this shift in focus, prompting social researchers to analyse and evaluate social movement activity across a number different dimensions — reflecting the complex combinations of psychological motivations and programmatic objectives associated with present-day social movement forms. Some relevant approaches toward the analysis of new social movements will now be discussed.

*'New' Social Movement Analysis:  
Framing, Narrative and The ARRR Model*

According to the NSMT model, now one of the most dominant approaches towards contemporary social movement research used today, a so-called new social movement can be analysed according to the following criteria: the point of view of its actors, the relationship between such actors and wider culture, and the social movement's framework for action (Wieviorka, 2005). Practically speaking, these central aspects of new social movements can be productively approached by using the following related theoretical and analytic schemes: framing theory, narrative analysis and the ARRR model. These will now be reviewed in turn.

### **Framing Theory / Narrative Analysis:**

Social movement framing theory (SMFT) proposes social movement formations are, in many instances, created through the use and manipulation of frames (Flynn, 2011a). In this respect, the theory attempts to understand the ways social movement organisations and social movement actors use *meaning* to frame ideas and events. Frame analysis is informed heavily by social constructivism and the symbolic interactionist tradition, particularly the ideas of Canadian Sociologist Erving Goffman (1974). Borrowing from Goffman's work, framing theorists suggest the act of framing — i.e. inclusion of specific factors/aspects within a given perspective at the inevitable exclusion of others — helps people interpret the world according to their social position and previous experiences. Some theorists within social movement studies suggest a type of framing referred to as *collective action frames* are used within social movements to bring people together and incite action. As Benford and Snow (2000) suggest: "collective action frames are action-oriented sets of beliefs and meanings that inspire and legitimate the activities and campaigns of a social movement organisation (SMO)" (614). From this perspective, an SMO — a formal group functioning as part of a broader social movement, providing resources necessary for the movement to develop — deploys collective action frames to create a set of shared symbolic meanings which inspire movement participants to cooperate toward a certain goal (Linde, 2001). Today framing processes are regarded as a "central dynamic in understanding the character and course of social movements" (Benford and Snow, 2000: 612). According to this perspective, collective action frames — crucial for social movement mobilisation — are understood as having three core framing tasks:

- **Diagnostic Framing:** refers to the identification of a problem. An essential framing exercise, movements rely on diagnostic frames to appeal to potential adherents. The task of this framing exercise is for social conditions to be framed as social problems, enabling movements to then work toward necessary solutions.
- **Prognostic Framing:** refers to the articulation of a proposed solution to the problem identified at the previous stage. This framing exercise simultaneously reinforces the diagnosis offered, while also often attempting to either refute or minimise the framing of social movement opponents (a.k.a. 'counterframing').
- **Motivational Framing:** "provides a 'call to arms' or rationale for engaging in ameliorative collective action, including the construction of appropriate vocabularies of motive" (617). This final framing task is concerned with the creation of reasons to get involved with the movement, mobilising action by endowing potential adherents with a sense of agency.

SMFT is a useful analytic tool for researchers seeking to understand how the use of symbolic meaning might influence how and why social movements coalesce and mobilise. However, in line with the standard limitations of other qualitative-interpretive methods, framing theory has faced criticism due to the countless possible variations of how adherents can interpret and understand their activities. Moreover, it neglects to consider the extent to which some movement participants may choose to reject or subvert preferred collective action frames (Hart, 2008). To gain a more nuanced understanding of how social movement actors use semiotic referents and judgements – expressions of encoded symbolic meaning – in defining and motivating new social movement activity, researchers might choose to draw their attention to other qualitative domains. In this sense, other theorists have recognised how social movements benefit from the creation of collective identity through the formation of a strategic or unconscious narrative.

According to Christiansen (2011b), narrative is used within social movements to build and maintain collective identity: Narratives create for movement members a sense of belonging to a group and place of the member in relation to the group, defines the origins of the movement, and connects movements to other past movements and victories. This capacity, he suggests, makes the use of narrative a potentially valuable way for movements — and indeed SMO's (Linde, 2001) — to overcome setbacks or maintain identity, ideology and tactical know-how over time. Narratives may be transmitted either through oral storytelling or through other narrative devices such as tropes — which condense and bundle multiple ideas and meanings into a single bundle such as a phrase, image or word. Christiansen warns that while narrative is a useful tool for movements, it may also limit understandings of events, reinforcing us vs them boundaries, and the ways they and their group fits into the collective story. As such, scholars using narrative analysis must be careful to notice the positionality of the storyteller, the audience, and even the scholar examining the narrative (Glover, 2004; Polletta, 2006). Given their concern for the socially constructed drivers underlying social movement activity, framing theory and narrative analysis represent interpretivistic analytic modes which attempt to access and deconstruct the symbolic meaning systems actors use to position and advance their activities. These two approaches can assist researchers seeking to understand the point of view of social movement actors, and how such participants conceptualise their relationship with broader culture. Further to these attempts at interpreting the qualitative-symbolic basis for social movement activation and participation, other theorists have proposed more formal movement typologies based on their goals and objectives. These will now be discussed.

### **The ARRR Classification Scheme of Social Movement Objectives**

Social movement theorists have put forward several schemes of classification to distinguish between social movement types. Flynn (2011b) suggests within post-industrial societies, norm-oriented movements are more common than value-oriented movements: As Morrison (1971) proposes, so-called norm-oriented movements attempt to make changes within an existing system, whereas by contrast, value-oriented movements attempt to change the primary goals of a system. Correspondingly, Anthropologist David Aberle (1966) introduced a typology of

social movements referred to as the alternative, redemptive, reformatory, and revolutionary model (ARRR), which remains one of the most influential classification systems developed to date. The ARRR model classifies social movements across two dimensions: 1) *locus* of change sought, and 2) *amount* of change sought. Concerning locus of change, a social movement may work to instigate change on an individual level through personal behaviour, or regarding broader society by attempting to change structures such as the economic order, the technological order, the political order or the law. Equally, the amount of change sought may be either partial or total in degree (Flynn, 2011a: 29). The following points of differentiation are offered under this model, apparently capturing most nineteenth and twentieth-century social movements:

- Transformative movements: Revolutionary type movements such as radical political groups who seek complete structural change, and may participate in violent action to this end, often anticipating the coming of cataclysmic change (Almanza-Alcalde, 2005). E.g. the Christian Identity Movement and the Ku Klux Klan (Robinson, 2006).
- Reformatory movements: Reformatory movements work to create partial structural change to address injustices and inequalities. Such movements tend to be single-issue focused, and in many cases, this issue becomes a starting point for a more extensive program of change and social restructuring. E.g. the Umbanda religion of Brazil, which attempts social reform by revitalising past cultural heritage (Dann, 1979).
- Redemptive movements: Redemptive movements seek total change in individuals —examples of this type of movement are personal recovery movements which offer their members a strategy for personal redemption, i.e. the Alcoholics Anonymous organisation.
- Alternative movements: Alternative movements work toward partial change in individuals through developing a parallel way of life which departs from mainstream culture, as opposed to changing the existing social and political



system. E.g. the sustainability movement and back-to-the-land movement in the US during the 1960s and 1970's (Almanza-Alcalde, 2005).

The ARRR model can then arguably classify and evaluate the target population and scope of almost any social movement, or at least most those formed throughout the nineteenth and twentieth centuries due to its broad and inclusive schema. At the same time, the model has been criticised for only dealing with ideal types of social movement, and disregarding the extent to which some movements can exhibit elements of all four proposed-types (Masuda, 1998). Despite these shortcomings, the ARRR model is one of an array of investigative tools – along with framing theory and narrative analysis – which contemporary researchers have at their disposal when contending with present-day social movement forms.

This section has recalled noteworthy trends in how the study of social movements has been approached to date, outlining recent developments in SMT. In summary, social movement studies – which witnessed a swing away from mass psychology-based linear-sequential understandings of social movement activity from the 1960's, toward a focus on the rationally-based political and structural impact of social movement campaigning – has since shifted back to re-engage with the personal, intersubjective meaning-based motivation systems underlying social movement activity. These renewed efforts aspire to unprecedentedly sophisticated accounts of social movements mindful of both the psychological and social pull-factors used to attract/maintain SM participation, as well as the range of possible ambitions for social movements which can apparently vary considerably. As such, practically speaking, NSMT-inspired researchers can attempt to define both the ideational and programmatic features of such movements in relation to framing/narrative analysis and the ARRR model respectively. Simply put, analysis of complex systems of value-oriented thought and action associated with twenty-first century new social movements may be feasibly attempted using social constructivist-based theoretical lenses, the qualitative nature of which can work to deconstruct and evaluate both the ideological and programmatic basis of movement involvement and activity simultaneously. In this regard, symbolic interactionism offers a highly potent theoretical perspective toward the genesis and evolution of meaning and identity

(Blumer, 1969), which has been used by social researchers attempting to understand the ideational and strategic features of new social movements.

Symbolic interactionist approaches emphasise the importance of both symbols and the interpretive process (Patton, 1990), and with it, are attuned to recognising and exploring both the individual psychological and social-cultural aspects of new social movements. Correspondingly, the research is concerned with investigating the inner-world of semiotic meaning which underlies the pursuit of human enhancement through technology, in accordance with its theoretical influence from the philosophy of technics as organ extension developed by Kapp (1877) and the significance of symbolic culture toward human development raised by Mumford (1967). All things considered then, the symbolic interactionist theoretical framework as it has been applied in the context of new social movement theory – chiefly through framing theory and narrative analysis – then offers this project a relevant lens which might be productively adapted to explore the semiotic and ideational features which surround transhumanism and THEA. Given how these symbolic-interpretive approaches toward new social movement studies attempt to access and deconstruct the actor motivations and programmes of action, it is relevant to identify how the practice of framing and narrative appear in existing literature on transhumanism, and indeed also how activities and mobilisations associated with the transhumanist movement relate to the schemes of intended change outlined in the ARRR model.

## 2.2 Contested Transhumanisms: Internal vs External Histories of an Idea(l)

Even a cursory glance at literature written by transhumanists reveals the prevalence of normatively-loaded action framings and strategic use of narrative which advocates apparently evoke when referring to the transhumanist movement. These symbolic-ideological features are most obviously reflected in histories of the movement produced by sympathetic academic commentators, who's inside accounts suggest it is possible to identify cultural and philosophical antecedents to transhumanist thought which vastly predate transhumanism's formalisation into an organised movement in the late twentieth century. By contrast, this section builds a precise,

recent social history of transhumanist thought deliberately from a critical outside perspective, outlining the transhumanist philosophy's inception as a set of loosely defined cultural, political and philosophical ideas and programs which are now circulating in the contemporary era.

The *Oxford English Dictionary* defines Transhumanism as: “a belief that the human race can evolve beyond its current limitations, esp. by the use of science and technology” (OED, 2008). At the most basic level then, transhumanists are those who share a philosophical outlook concerned with a proposed elevation of the human condition beyond existing limitations through primarily scientific and technological means. From this perspective, emerging technology is an enabling platform to amplify and indefinitely extend human capabilities across various topical domains of concern. Oxford Philosopher Nick Bostrom — founding director of the *Future of Humanity Institute* and outspoken transhumanist advocate — suggests the human desire to acquire new capabilities is as old as our species itself (Bostrom, 2005). In his effort to trace the cultural and philosophical roots of transhumanist thought, Bostrom stipulates that humanity has long been marked by an impulse to transcend the natural confines of our being, citing Mesopotamic literary renderings of the quest for immortality apparently appearing as far back as approximately 1700C BC (Ibid: 1). The rhetorically compelling suggestion that *transhumanist-type* longings for self-transcendence have been present since the dawn of human civilisation is a convention repeated within internal-histories produced by supporters of the movement (Jones, 1995; More, 2013). For this reason, to open a critical review of transhumanist literature, in the interests of clarity it is necessary to disaggregate supposed proto-transhumanists from transhumanists proper.

### *Prelude:*

#### *‘Proto-Transhumanists’ & Etymology of the Term Transhumanism*

To identify the beginnings of transhumanism as a social movement with greater precision than standard insider accounts offer, it is first relevant to recount key historical conditions which helped shape the ideological character of the present-day transhumanist philosophy, particularly transhumanism's principle sympathetic

relationship to humanism. Although it is not possible to address the complex histories and varieties of humanism within the limited confines of this chapter<sup>1</sup>, it is necessary to at least knowledge transhumanism's continuity with humanist onto-ethical assumptions: In this respect, modern-day transhumanism positions itself as essentially an intensification of Renaissance humanist ambitions for the cultivation of human virtue, coupled with an unwavering faith in Enlightenment values such as self-determination, rationality and progress. While sharing classical humanist notions of malleability to the human condition, the realisation of transhumanist goals is reliant upon strategic application of the scientific method developed in the early seventeenth century (More, 2013). Despite somewhat analogous intellectual and cultural attempts at channelling the forces of rationality and optimism to meet human social and political objectives in both France and Russia during the nineteenth century<sup>2</sup>, the formal synergy of 'scientific humanism' provided the conceptual basis for the present-day transhumanist movement would not occur until the late twentieth century. Semantically speaking then, the term transhumanism has complex origins – much like its predecessor humanism – having been coined independently multiple times in different circumstances.

The first academic reader dedicated solely to transhumanism — edited by early transhumanist pioneers Max More (formerly Max O'Connor) and his wife Natasha Vita-More (formerly Nancie Clarke) — provides the following on the origins of the term when outlining what they consider the relevant historical precursors, roots and initial formations of present-day transhumanism:

“In 1312, in his *Divine Comedy* Dante Alighieri uses the term *transhumanare*, meaning to pass beyond the human, but his usage was religious or spiritual in nature. T.S Eliot's use of “Transhumanized” in his 1935 *The Cocktail Party* is about “illumination” rather than technologically mediated transformation. A closer fit is Julian Huxley's brief chapter “Transhumanism” in his 1957 book, *New Bottles for New Wine*. He used it to mean “man remaining man but transcending

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<sup>1</sup> For an overview of Humanism see Davies (1997).

<sup>2</sup> The origins of French *Positivisme* and Russian Cosmism are well documented in Wright (2008) and Young (2012) respectively.

himself, by realising new possibilities of and for his human nature.” He did not, however, develop this evolutionary view into a philosophical position, and his usage came to light years after the term was independently coined as part of the contemporary transhumanist movement” (More, 2013: 8).

Other commentators agree with the above claims that explicit programmatic renderings for what should constitute transhumanist-type activity did not occur until the closing decades of the twentieth century. In this sense, the first writer to use the term *transhuman* to signify the deliberate transition beyond the human was Iranian-American futurist author F.M. Esfandiary in the final chapter of a 1972 book titled *Woman, Year 2000* (1972: 291-298). Throughout his various writings in the 1970's Esfandiary (who later became known as FM.2030) used the word to describe those coming to adopt the new technologies, lifestyles and cultural world-views that he believed would be transitional to a *posthuman* state (Hughes, 2004). In this respect, FM-2030 used transhuman as short-hand for *transitional human* which he understood to represent “the earliest manifestations of new evolutionary beings, on their way to becoming posthumans” (Esfandiary, 1989: 42). Esfandiary's description here deliberately evoked a strong sense of teleological-rational progress, as he maintained the technological transhuman would imminently surpass the organic human, and, inevitably, the transhuman will itself, in turn, be superseded by the posthuman. Thus, within Esfandiary's framework, the transhuman motif stands for those presently engaged in measures to overcome the biological limitations imposed by nature, whereas the posthuman represents a possible subsequent emergent being no-longer constrained by the frailties of sickness, ageing or even death. Despite Esfandiary's model assuming a level of wilful, technologically-mandated self-direction on the part of the transhuman individual, transhumanism was not fully elaborated upon and developed into a coherent philosophical worldview formally organised around a shared set of values until the early 1990's. The first actionable incarnation of modern-day transhumanism in this sense travelled under the banner of extropianism, a philosophy of the future to proactively advance the human condition using strategic applications of science and technology.

### *From Evolutionary View to Philosophical Position:*

## *The Formalization of Transhumanist-Extropianism in the 1990's*

The extropian movement — originating on the west coast of the USA in the late 1980's — was instigated by the University of Southern California graduate students Max O'Connor and Tom Bell (later known as Tom Morrow), who co-founded the techno-utopian journal *Extropy: Vaccine For Future Shock* in 1988. Their title for this venture represented a dissident antonym to *entropy*, a term popularised by the field of thermodynamics as a referent to the measure of disorder within a system. By contrast, *extropy*, coined by Tom Bell and later defined by Max O'Connor in 1988, was suggested to represent "the extent of a living or organizational system's intelligence, functional order, vitality, energy, life, experience, and capacity and drive for improvement and growth" (Cordeiro, 2013: Online). Taking influence from the apparently seismic upcoming developments which popular science and technology writers had brought to the attention of the wider public in the decade prior<sup>3</sup>, extropianism and its associated new digital media platforms apparently provided a key incubator for the transhumanist movement. Fuelled by interest from local futurist sub-culture — and operating under a set of proactive, optimistic and rational ideals — extropy magazine totalled 17 print issues from 1988-1997, before migrating to the web as Extropy Online. Correspondingly, the first instance where the term transhumanism was used as a label to mark a distinctive philosophy and worldview was within the essay *Transhumanism: Towards a Futurist Philosophy* written by the newly renamed Max More<sup>4</sup>.

More's canonical essay here declared that extropianism is an emerging variety of transhumanism to be developed and refined within the journal, principally according to the extropian philosophy, which affirms the values of boundless expansion, self-

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<sup>3</sup>Chiefly among which the seminal work of Molecular Nanotechnologist Eric Drexler (1986), and Artificial Intelligence pioneer Marvin Minsky (1986).

<sup>4</sup> According to the editorial brief within this issue, O'Connor changed his name to 'Max More' to "remove the cultural links to Ireland (which connotes backwardness rather than future-orientation) and to reflect the extropian desire for MORE LIFE, MORE INTELLIGENCE, MORE FREEDOM" [sic] (More, 1990: 4).

transformation, dynamic optimism, and intelligent technology (More, 1990: 6). In this paper, More set out to demonstrate how religion acts a highly entropic (i.e. restrictive) force upon human evolution, and then by way of resolve, put forward the argument for transhumanism as a type of secular alternative which would support humanity's advancement towards the posthuman condition. Specifically, he postulated that the twin entropic influences of religion and the state synergistically boost one another, with the former encouraging a blind-faith, irrationalism and resignation which ultimately inhibits human growth. The paper then emphasises the need to replace religion with some other meaning-fostering system, offering the extropic principle of *dynamic optimism* as an internally generated motivation for progress, and tactical use of evidence-based reasoning for the empowerment of humanity, ultimately to move “forward, upward and outward” (Ibid: 9). No doubt, the valorisation of autonomous self-direction underlying this approach reflects extropianism's highly individualistic interpretation of transhumanism, which carries countercultural, rejectionist and hierarchical undertones. In no uncertain terms, More's paper calls for extropians to reject the common culture of negativity, and instead strive perpetually for a superior existence according to their own efforts.

Strong individualistic political convictions aside, at the heart of the extropian-transhumanism presented in More's early writings, was absolute faith in the scientific method — and its various associated appendages such as canons of inductive and deductive reasoning — as a means to liberate humanity from the otherwise constricting influences of church and state. Early transhumanist philosophy was then formulated to provide a third-way which would effectively counter the ideological excesses of late modernity, with the article suggesting “the alternative to religion is not a despairing nihilism, nor sterile scientism, but a transhumanism” (Ibid: 6). With its central ambition for science and technology to amplify and indefinitely extend human capabilities, the ideals of extropian-transhumanism birthed here carry a strong tone of human exceptionalism, and the belief that humans are marked by a persistent desire to “understand and control their environment and experience” (Ibid: 7). In this respect, the first extropian-transhumanist agenda explicitly positioned itself as an outgrowth of Enlightenment humanism, emphasising an urgent need for a rejection of superficial and causal explanations in favour of rational scientific inquiry, while also placing the onus upon individual liberties and self-directed

processes of personal growth and expansion. A subsequent article titled *The Extropian Principles* authored by More in this same edition of *Extropy* (#6), outlines and expands upon the core principles held to underlie the extropian philosophy of transhumanism. Tellingly, this article provided a list of texts taken to “embody extropian ideas”, among which we can count titles of an unmistakably libertarian-capitalist persuasion, such as Ayn Rand's *Atlas Shrugged* (1957) and the work of contrarian Environmental Economist Julian Simon (1981).

After this initial engagement with formalising a philosophy of transhumanism, from Spring 1991 onward the journal came to be renamed *Extropy: The Journal of Transhumanist Thought* and increased its focus on matters of transhumanist concern from an extropian standpoint. Also in 1991, the extropians email list was launched, a digital platform for futurist networking and discussion which continues as *Extropy-Chat* to this day<sup>5</sup>. Soon after, the *Extropy Institute* (ExI) — a unified network of various communities and intellectual groupings sharing extropic future-oriented concerns — applied for incorporation in early 1992, and become a fully operational 501(c)3 California non-profit on 10 May 1992. *Extropy* #9 (Summer 1992) announced this development, an edition which also included the addition of a fifth extropian principle under the heading of *spontaneous order* (More, 1992). This added principle stands for the belief that centralised attempts to control the activity of single units within a system will inevitably lead to an entropic loss of efficiency, as centralised direction is taken to constrain exploration, diversity, freedom and dissenting opinion (Ibid, 7). Accordingly, More suggested spontaneous ordering processes are integral to the extropian world-view, as first explained in *Order without Orderers* appearing in *Extropy* #7 (Spring 1991). In early extropian political philosophy — taking impetus from classical liberal economist Friedrich Hayek — the free-market embodies spontaneous order, with unfettered market “allow[ing] complex institutions to develop, encourages innovation, rewards individual initiative, reinforces personal responsibility, fosters diversity and safeguards political freedom”

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<sup>5</sup> At the time of writing the *Extropy-Chat* network continues to provide an active platform for futurist discussions, making it the longest running transhumanist email list in the world.



(More, 1992: 7). The underlying libertarian bent of extropianism<sup>6</sup> is well captured in the principle of spontaneous order, as More (1992) suggests decentralised so-called spontaneous ordering processes are considered vital to satisfy the allied principle of *boundless expansion*. As such, rather than assuming a typical corporate structure, ExI was designed to operate as an *adhocracy* — a term coined by American writer and futurist Alvin Toffler when referring to a highly networked non-hierarchical organisation. In this regard, the extropians expected the internet would provide a transformative platform for the institute, with new online technologies such as email, web conferencing and electronic bulletin boards potentially allowing the independent coordination of ambitious future-oriented projects which would require a diverse range of skills and resources. Sure enough, ExI delivered the world's first transhumanist conference in 1994 (*Extro I*) and launched a website in 1996 (extropy.org) which came to incorporate and obsolete the paper magazine.

Although only one subset of a broader west-coast futurist subculture unfolding at the time<sup>7</sup>, by the end of the twentieth century, extropianism had grown to become the most visible and formally organised wings of transhumanism. Understandably, however, for a group apparently sanctioning the annihilation of every conceivable technical, social, economic and legal barrier standing in the way of their quest for radical technological transcendence, extropianism has been met with its share of criticism by those both inside and outside of the transhumanist movement.

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<sup>6</sup> Although libertarian politics has at no point been declared intrinsic to the extropian philosophy, a scan of the extropy-chat archives reveals the topic of libertarianism has been an enduring discussion point across the magazine and e-mail list over the years (Extropy Institute, 2003-16).

<sup>7</sup> In the first years of the 1990's other distinct futurist groups emerged within this space including the *Transtopians* and *Singularitarians*. While sharing some overlapping interests, the two can be clearly distinguished as such: Transtopianism positions itself as being closely related to its parent philosophy transhumanism, but with an even more 'hardcore' anarchic-hedonist edge.

The latter term refers to a group focused on bringing about the technological 'singularity' — or point at which machine intelligence supersedes human intelligence — predicted by computer scientist and science fiction author Vernor Vinge. *Singularitarianism* coalesced into a formal ideology in 2000 with *The Singularitarian Principles* by artificial intelligence researcher Eliezer Yudkowsky.

Paraphrasing from Nietzsche's subtitle '*How to philosophise with a hammer*' in his 1889 *Twilight of the Idols* — rigorous destruction of the moral codes of then-contemporary culture — Computer Scientist Ben Goertzel suggests the extropian creed might analogously be labelled '*How to technologize with a hammer*' (Goertzel, 2000). As a long-term supporter of transhumanist causes himself, Goertzel critically reflects on the apparent lack of conscience and extremes of anti-socialism espoused by some extropians. Goertzel cites Austrian-American roboticist Hans Moravec who, in a 1993 exchange with writer Mark Dery, apparently went as far as to embrace a homology between those on the lowermost rungs of the socioeconomic ladder and extinct species of natural selection's past. Moravec's social-Darwinist discard for 'failed human cultures' is held alongside a belief in a rapidly approaching future obsolescence of the human race itself, and, with it the suggestion any transitional socioeconomic implications following the advent of advanced-level artificial intelligence and robotics can be dismissed. In this ruthlessly aloof perspective, Moravec implies human beings will be jettisoned eventually as a failed experiment, displaced by super-intelligent, superior beings in the wake of scientific-technological progress.

As a counterweight to the detached moral-ethical blunting of Moravec, Goertzel recognises how, within *Extropy #10*, although More explicitly equates the optimal extropian with Nietzsche's *Übermensch*, he charitably posits that the extropian *Übermensch* "will exude benevolence, emanating its excess of health and self-confidence" (More, 1993: 23). Implicit in this statement is clearly an assumption that unconstrained adoption of high-technological developments by a privileged few will eventually deliver some form of trickle-down benefit to wider society. In this respect, Mores' prophecy — with his emphasis placed upon life extension rather than robotics — appears moderate by comparison to Moravec's, yet still apparently carries an underlying air of indifference toward those living in less fortunate economic conditions. On this point, Goertzel recognises how extropianism is highly associated with relativistic moral philosophy, and suggests its followers may be drawn to disregard human-values altogether in pursuit of actionable attributes such as knowledge, understanding and power which seem to have an absolute meaning that morality lacks. Goertzel closes his meditation by resolving that extropians have considered aspects of our future more thoroughly than anyone else, so should not be

ignored, but equally the idea that makes their group unique — an alliance of transhumanist technology with uncompassionate libertarian philosophy — must be opposed with great vigour.

Other more detached commentators covering the rise of extropianism at the time picked-up on Goertzel's concerns. The extropians reputation for extreme quirkiness was satirised by computer scientist Toby Howard through an article appearing in the August 1996 edition of anomalous British magazine *The Fortean Times* titled 'Get a life — Forever!' (Howard, 1996). Here the author claims the movement, with its complete devotion to the power of science, is comprised of “unrepentant techno-freaks” who visualise a complete transformation of humanity. Howard offers a tongue-in-cheek overview of the main tenants of extropian thought, recalling with humour a salacious anecdote following a lavish extropian gathering as reported in earlier journalistic coverage of the movement by *WIRED* magazine (Regis, 1994). This article's mocking tone echoes that of the first popular *exposé* of the emerging transhumanist culture, Ed Regis's *Great Mambo Chicken and the Transhuman Condition* (1990) written just as the extropians began efforts to formalise and steward the transhumanist movement. Despite its flippant satirical manner, Howard's article concludes with the serious suggestion that although their optimism “makes a welcome change from much current fatalistic pre-millennium thinking”, the attitude of self-centeredness underlying extropian thought — and with it the potential to neglect broader social factors — could be a cause for future concern.

In summary, transhumanism began to resemble a kind of social movement — at least fitting Porta and Diani's (2006) description — based around futuristic themes in the early-to-mid 1990's after its first wave of supporters worked to formalise some philosophical tenets, and build networks for discussion via then-newly emerging technologies of information and communication. Through this review of relevant literature related to transhumanism's history and initial inception in extropianism, we can begin to recognise some preliminary framing mechanisms and use of narrative typically employed by those writing within the movement. Simply put, extropian-type transhumanist advocates use of diagnostic framing appears to centre around the ‘problem’ of current human limitation, which by way of prognostic resolve is suggested to be remedied by the strategic use and application of technology —

particularly under conditions which are ideally uninhibited by political and regulatory constraints. Further still, it would seem transhumanist motivational framing revolves around the suggested imminent — maybe inevitable — coming of radical technological changes, the likes of which could perhaps in principle be purposefully marshalled to advance a range of human aims and ambitions. As both internal histories and works of philosophy produced by transhumanists indicate, extropian-transhumanism apparently repeats long-established compelling narrative tropes associated with humanism — such as anthropocentrism and the notion of teleological-rational progress — perhaps in a fashion intended to help foster and maintain both group-belonging and identity over time.

Although initially formalised as a philosophical outlook rather than an explicitly political endeavour, it is clear political divisions have long existed across transhumanist factions, as have external critiques based on said radical politics and the perceived eccentricities of those involved with the scene. By any reasonable estimation, it appears transhumanism resembles a kind of ‘new’ social movement, with objectives based on radical extrapolations around the assumed power of emerging science and technology. Having introduced transhumanism’s conceptual framework and outlined the circumstances surrounding its early coalescence as a form of organised collective action, it is relevant to examine more recent shifts in mobilisation which have occurred in the last two of decades, as new transhumanist SMO's have attempted to further the causes associated with the movement.

## 2.3

### Mobilisations: Techno-Utopian Collective Action Frames?

Further to the initial conceptual overview and early history of the transhumanist movement provided in the previous section, this section presents a further select chronology of the continued mobilisation around the concept of THE which has occurred in the first decades of the new millennium — where transhumanist groups have apparently become increasingly organised, and ultimately politicised. It begins by characterising influential early transhumanist organisations through a review of

notable literature produced by such institutions, particularly recalling those texts which have an overtly action-orienting, prescriptive quality. Having outlined a history of efforts at popularising of transhumanism up to present — again reflected in literature produced by those writing from both within and outside the transhumanist movement — the section proceeds to review existing models formed around the range of motivational-cultural factors associated with techno-utopian styles of thinking in the recent past. While these prior commentaries are overall, not empirically-derived, nor do they address transhumanism explicitly, never the less they provide a sufficient rudimentary starting point to begin modelling the kinds of collective action framing mechanisms, and narrative formations which might reasonably be expected to coincide with technological human enhancement advocacy-type worldviews. As such, I examine claims related to the cultural and psychological origins of strong scientific-technological enthusiasm as put forward by such commentaries. I then synthesise these descriptions with other accounts of both science as a social movement and on the forms of symbolism surrounding science in the public sphere — ultimately, to consider how focused empirical work might help to advance understandings in this area.

### *Early Transhumanist Organizations in the 21st Century: 1998-2008*

A couple of years after *Extropy* magazine migrated online, in 1998 *The World Transhumanist Association* (WTA) was founded by UK-based philosophers Nick Bostrom and David Pearce to stand as "an international non-governmental organisation [advocating] the ethical use of technology to extend human capabilities" (Surtherland, 2006). In the same year, an international group of authors – with input from other Transhumanist groups established throughout the 1990's, including *Aleph* in Sweden, *De:Trans* in Germany and *Transcedo* in the Netherlands – published the first *Transhumanist Declaration* setting out some essential agreed principles of the evolving transhumanist program. The original declaration — since revised by numerous individuals and organisations over the years — articulated an intention for transhumanists to embrace new technologies to broaden human potential and counter growing existential risks while keeping in line with ethical principles such as choice, dignity and global responsibility to present and future generations (HPlus Pedia,

2018a). Not long after, in 1999 Nick Bostrom wrote the *Transhumanist FAQ* — through consultation with various members of the WTA — to provide a "broadly based consensus articulation of the basics of responsible transhumanism" (Bostrom, 2003: 54). A revised and expanded FAQ with input from additional contributors was published in October 2003 (Bostrom, 2005: 26).

Contrary to the extropian transhumanists who had based their concept of morality on a virtue foundation, the WTA effectively pooled the perspectives of a growing subset of European democratic transhumanists who instead advocated a consequentialist ethics (More, 2013: 13). American Bioethicist James Hughes (2004) recalls how the extropian's fellow-travellers at the WTA's produced its two founding documents — the declaration and FAQ, both which had contributions from Max More — from a consciously liberal-democratic perspective. Hughes recognises More revised his Extropian Principles in 2000, by way of response to these European trends and presumably his philosophical maturation, to a less libertarian version 3.0 (More, 2000). In this amended document, More set aside his earlier, anarcho-capitalist *spontaneous order* for the much more moderately libertarian *open society* (Hughes, 2004: 168). He presented the remodelled principle as such:

*Open Society — Supporting social orders that foster freedom of speech, freedom of action, and experimentation. Opposing authoritarian social control and favouring the rule of law and decentralization of power. Preferring bargaining over battling, and exchange over compulsion. Openness to improvement rather than a static utopia* (More, 2000: Online).

More has since reportedly maintained that extropianism is not libertarian but instead is, in fact, compatible with many liberal open societies, just not those under theocratic, authoritarian or totalitarian regimes. Notwithstanding these apparent efforts to move out of the political fringe, according to Hughes (2004), most extropians remain blinkered techno-optimists. Moreover, he maintains their absolute faith in technological progress and championing of personal liberty makes the extropian community disproportionately opposed to cautionary collectivist initiatives such as those espoused by the environmental movement. Sure enough, it appears early extropian political mobilisations square with Hughes' account of the group.

In February 2004, the Extropy Institute (ExI) organised a two-week *Vital Progress Summit* in response to President Bush's conservative Bioethics Council's *Beyond Therapy* (2003) report, which eventually led to the development of the proactionary principle (ProP). ExI's summit comprised of a 2-week virtual discussion and debate around how best to counter the growing political influence of conservative groups apparently intent on "halting scientific advancement" (Extropy Institute, 2004). Accordingly, the proactionary principle was conceived in explicit opposition to the precautionary principle referenced within the original Bioethics Council's paper, a risk-management strategy which emphasises the need to minimise the potential harm caused by scientific and technological innovation. By contrast, the proactionary principle — authored by Max More and taking influence from keynote participants at the 2004 ExI summit — suggests the precautionary principle illegitimately shifts the burden of proof away from those who propose a restrictive measure, and thus with it systematically biases decision making against technological progress (Extropy Institute, 2005). In this respect, More suggests activists often leverage the precautionary principle based on perceptions of risk rather than actual risk, and thus disregard the opportunity costs *vis-à-vis* technological and cultural advances after such restrictions become implemented. The ExI closed in late 2006 upon accomplishing its primary goal to develop the philosophy of transhumanism and instigate a culture of debate around improving the human condition, after which the WTA — renamed *Humanity+* in 2008 — apparently became the foremost transhumanist organisation, aided by academic partners such as the *Institute for Ethics and Emerging Technologies* (IEET) and Oxford's *Future of Humanity Institute* (More, 2013).

### *Party Politicisation of Transhumanism: 2014-Present*

While transhumanism began life as a loosely organised, somewhat fringe philosophical movement born out of West-Coast technological cultures, following the Extropy Institute's early attempt at influencing political discourse, it is evident that in more recent years, other activist contingents of the transhumanist movement have come to attempt engagement with increasingly mainstream political processes

within technologically developed societies worldwide. On October 7th 2014 the first organisation bearing the name *Transhumanist Party* was founded in the United States of America by Californian futurist and philosopher Zoltan Istvan. *The Transhumanist Party* describes itself as “an American political organization dedicated to putting science, health, and technology at the forefront of United States politics” (Transhumanist Party, n.d). Shortly after founding the party, Istvan announced his intention to run as ‘The Science Candidate’ on the Transhumanist ticket at the 2016 US Presidential Election (Istvan, 2014a). Moreover, also in 2014, self-declared transhumanist Gabriel Rothblatt — notably also the son of Martine Rothblatt, transgender businesswoman founder and CEO of biotechnology company *United Therapeutics* — ran for a congressional seat as a Democratic candidate in Florida's 8th district (Democracy for America, 2014). Although eventually losing to incumbent Republican representative Bill Posey by obtaining roughly 35% of the popular vote, according to at least one commentator within the transhumanist community, Rothblatt's fight “open[ed] the door for other transhumanists to become part of the political action” (Ashley, 2014: Online). This recent trend toward mobilising transhumanist concerns through direct engagement with established democratic proceedings began a couple of years prior with the election of Giuseppe Vatinno, the world's first transhumanist member of parliament in Italy (Prisco, 2012). *The Italian Transhumanist Association* subsequently disassociated from Vatinno — triggering his removal from the board of directors of Humanity+ and the IEET — after he posed a parliamentary question to the Minister of Defence and Foreign Affairs on UFO's (Network H+, 2013).

In the time since the WTA was established, transhumanists have made other comparable attempts to scale transhumanism as a transnational global movement. After the first-flush of transhumanist activism via party-political formation, a steady stream of nominally political organisations centred on human technological enhancement emerged in Europe and North America. This new wave of groups came following the development of *Transhumanist Party UK* (TPUK), appears due at least in part to the efforts of freelance management consultant Amon Twyman — current leader of TPUK and founder of *Transhumanist Party Global*. Speaking in an interview posted on the TPUK website on January 3rd, 2016 in response to a question on how the idea of the *Transhumanist Party UK* was born, Twyman recalls:



“*[W]hen I and others heard of Zoltan Istvan’s US Presidential bid (which was obviously not a serious bid but rather a media awareness campaign), it seemed that we had a choice between carrying our ideas forward under the Transhumanist Party banner, or having someone else do it who was perhaps not as familiar with traditional transhumanist concerns*” (Twyman, 2016: Q2).

From the above, it is apparent the TPUK was born out of dissent for the mainstream politicisation of transhumanism led by Zoltan Istvan. Further still, this first ‘breakaway’ transhumanist faction apparently proved instrumental in forming an online network to encourage others to form transhumanist party-styled programs. Its founders later created *Transhumanist Party Global* – TPG – which self-identifies as “an informal organisation dedicated to supporting the development of Transhumanist Parties around the world”, principally by encouraging active cooperation between affiliated groups and sharing the lessons learned in setting up the UK party (Transhumanist Party EU, n.d).

A handful of such regional groups have been established at the time of writing, each baring varying levels of formal association with the TPG network. Officially, ten groups are recognised as full affiliates with the TPG movement, and a further ten associated groups are not yet qualified for fully recognised status — “due to a level of activity that is not yet mature enough to properly represent the movement in that region” (Transhumanist Party Global, n.d: Online-b). Interestingly, the operational structure of this transnational endeavour echoes the *ad hoc* de-centralised format of the Extropy Institute. Tellingly, under the entry for ‘Which is the most important or original TP?’, the FAQ emphasises how the organisations currently travelling under the Transhumanist Party banner all remain independent political entities operating according to their own internal rules, local laws and culture (Transhumanist Party Global, n.d). Correspondingly, Twyman explains how many of the preliminary ideas and initiatives for the Transhumanist Party UK were informed by *Zero-State* an earlier transhumanist group he founded in 2010-11 to explore the idea of functionally autonomous, self-governing communities acting together to form a virtual ‘state’ (Twyman, 2016a: Q4). *Zero-State* describes itself as a community affiliated with the Transhumanist Party working toward the establishment of a

Virtual-Distributed-Parallel (VDP) State or *polystate* committed to social futurism: Social Futurism is then defined as ‘a worldview which combines social justice concerns with the radical transformative potential of modern technology’ (Zero-State, n.d). In this respect, *Zero-State* also notably identifies as a variant of techno-progressivism — a term associated with the IEET used to denote an outgrowth of democratic transhumanism or technology-focused progressivism.

The *Transhumanist Party UK* — and its close descendent the TGP — apparently follow a democratic left of centre politics, emphasising voluntary collectivism at the regional level. This is contrary to both the right-leaning libertarian economics associated with the *Transhumanist Party USA*<sup>8</sup>, and the anarcho-capitalist sympathies of its main intellectual predecessor extropianism. Shortly before the Transhumanist Party UK’s official registration on June 12<sup>th</sup> 2015 — British computer scientist Alexander Karren ran as an independent candidate for the UK constituency of Liverpool-Walton with support of the nascent TPUK. Twyman’s blog post reflecting on the outcome of this venture — where Karren received 56 votes, coming second last in the constituency — suggested the exercise was not an attempt to run a serious electoral race<sup>9</sup>, but rather represented a “symbolic statement of intent” (Twyman, 2015a). More recent TPUK activities have included a petition started in February 2016 to whitelist *nootropics* — a class of drugs taken to allegedly improve cognitive and/or intellectual function in users — from the UK governments psychoactive substances bill<sup>10</sup> (Transhumanist Party UK, 2016). Also in February

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<sup>8</sup> For a self-authored account of the overlap between Zoltan’s transhumanism and libertarianism, see Istvan (2014b). Zoltan has been accused of holding autocratic control over the Transhumanist Party USA (Pellissier, 2015), and causing an ideological schism within the movement more generally (Twyman, 2015b).

<sup>9</sup> The party deliberately supported a candidate in a safe seat to raise awareness of the Party for future electoral campaigns — and with it “start a conversation about the bigger picture of politics” with the public uninhibited by concerns regarding their vote being wasted (Twyman, 2015c).

<sup>10</sup> At the time of closing the TPUK’s petition to the UK Government held 598 signatures. It is available to view online at:

<<https://petition.parliament.uk/petitions/120692>>

2016 Tywman authored an official TPUK statement in support of the US *Transhuman National Committee* (TNC) (Tywman, 2016b) — a political action committee focused on Transhumanism in US politics with a long-term goal of creating a transhumanist political party (TNC, 2016). If nothing else, in time since its formal party registration, under Tywman’s direction the TPUK has become a leading-edge of transhumanist political mobilisation, both in terms of organising UK-based activism and supporting the wider international development of the transhumanist movement. These efforts are clearly indicative of the tension between advocates espousing libertarian versus more social democratic political renderings of transhumanist philosophy — the likes of which are becoming more explicit as new transhumanist SMO's attempt to enter mainstream political discourses.

### *Technologized Collective Action Frames & Science as a Social Movement*

With its central concern for issues surrounding human self-identity — as well as the global scope of its advocate's ambitions and apparent reliance on both framing and narrative — transhumanism resembles a new social movement. However, to date, there has been very little empirical analysis directly investigating the social constitution of transhumanist groups, the collective action frames which might be used to mobilise interested constituents, or how such efforts may collide with other existing cultural/political norms. That said, a few academics and broader cultural commentators have issued analyses which attempt to capture the range of emotional, motivational and cultural factors surrounding enthusiasm for technology in the modern world. This section will review noteworthy instances of this work. For the sake of clarity, given the previously outlined significance of the information and communication technology revolution in the formation of the transhumanist movement, for our purposes it is particularly relevant to focus on those commentaries made post the advent of the internet in the relatively recent past.

British media theorists Richard Barbrook and Andy Cameron (1996) were among the first to issue a scathing criticism of technologically-centred idealism, based on their analysis of the historical, political and ideational factors which they took to have

formed the hyper-optimistic culture of technology on the West Coast of the USA. Barbrook and Cameron, writing during the mid-1990's from a Neo-Marxist perspective reported how there was an expectation that some new digital *hypermedia* assemblage was about to be birthed — via strategic combination of existing media with computing and telecommunications — which would be palpably greater than the sum of its parts. A seemingly ideal platform for this long-predicted technological convergence had then finally arrived with the internet, a reputedly boundless virtual space for human self-expression and creativity, perhaps then also bringing with it an untold opportunity for economic innovation and prosperity. The authors claimed a loose alliance of writers, hackers, capitalists and artists from the West Coast had already vividly defined a heterogeneous global orthodoxy for the information age. The techno-centred utopianism taken to be fuelling imaginations of those spearheading Silicon Valley's digital revolution was branded *The Californian Ideology* to honour the state where it originated.

For Barbrook and Cameron, a 'new faith' had erupted, combining a bizarre mix of cybernetic theory, free-market economics and counter-culture libertarianism, merging the cultural bohemianism of San Francisco with the hi-tech industries of Silicon Valley. Most disconcertingly, they believed paradoxical fusing of elements from both the political left and right marked the free-spirited and highly optimistic new *zeitgeist* of the emerging *virtual class*, ultimately forming a hopeful, yet ultimately directionless, technological determinism. In this sense, the authors posit that the insidiousness of the Californian Ideology had come to render social and political debates about the future obsolete, as the advent of hypermedia would never deliver the utopia it promised. This pervasive ill-effect had apparently been achieved by the naturalisation and offering of technological proof to libertarian political philosophy, and with it thereby foreclosing alternative futures. In respect, it is suggested the shared resolute anti-statism of the Californian ideologues acts to reconcile radical and reactionary ideas around technological progress, with its combination of elements of the so-called 'new' Left and Right effectively serving to pacify the demands of both. In sum, Barbrook suggests that under American neoliberalism the *digerati* have come to embrace a form of reactionary modernism, that effectively works to simultaneously sustain both economic growth and social immobility (Barbrook, 2000).

Indeed, another academic commentator who traced the wave of technologically-optimistic trends in thinking inspired by the early days of the internet – and has continued chronicling their evolution over the years – is New York based media theorist Douglas Rushkoff. In the mid-1990's Rushkoff wrote *Cyberia: Life in the Trenches of Hyperspace* (1994) as a first-hand participatory-observational account of the new subcultures formed around psychedelics and cyberspace as they unfolded in the early 1990's. Here, he speaks of the cyberian counterculture which exploded with the internet's arrival. This new epoch erupted as countercultural elements of youth culture – techno-rave, cyberpunk, new-age spiritualism and hallucinogens – collided with new technical-mystical unknowns such as the possibility of virtual reality, the promise of de-centralised, dis-embodied computer networks, and 'dream-laced' expectations of exponential technical growth. Rushkoff has since critically analysed the various political and economic dimensions to new media and information technology, including *Program or be Programmed* (2010) – a call for increasing technical literacy in the digital age – and *Throwing Rocks at the Google Bus* (2016) which dismantles the prosperity-oriented assumptions underlying the digital economy. In this sense, while he has distanced himself from the highly optimistic rhetoric used in the text, Rushkoff's *Cyberia* represents a sophisticated early attempt to capture, using participatory methods, the viewpoints of subcultures built around technology. In sum, Cyberians was the handle he assigned to those early sympathetic observers attuned to the myriad of transformative effects new technologies were having variously upon culture, thought systems, spiritual beliefs and biological evolution in the information age.

The initial boom of apparently feverish optimism associated with the internet's arrival led other cultural commentators of the time to reflect on the symbolic cultural significance of our increasing entanglement with ICT. San Francisco-based popular writer Erik Davis wrote *Techgnosis* (1998) – conceived of at the time of the world-wide web's growing global reach – to outline the long-standing apparently mystical impulses which he takes to motivate contemporary obsessions with media and technology. For Davis, the development of such technologies – particularly those surrounding information and communication – appear to have a highly irrational, though fundamentally inseparable, visionary underside. From this perspective. Davis

believes expectations and metaphysical longings born from religious intuition have animated the history of technological advances. In this sense, Davis suggest media technologies create a new interface between the self, the other and the world beyond: and as such increasingly represent a kind of foundation for the social construction of reality (Ibid: 4). To be sure, many accounts exploring the ideational system(s) underlying radical technological support appear to be based on – or indeed arise within – the geo-specific region of the West Coast of the United States. A detailed historic-cultural study by Fred Turner (2006) traces the chronology of the shift from 1960's counterculture to cyberculture and with it the subsequent arrival of what he calls digital utopianism. Turner's text, much like Barbrook and Cameron's which came a decade before it, identifies how the collaborative-communal ideas of the hippies inspired the hopes and expectations which surrounded the early days of the internet. Turner notices how San Francisco Bay-area counterculturalists and cold-war technologists entered an unlikely alliance, made possible by their shared belief in the transcendent power of *vision*. His analysis suggests afterwards came the now highly in-grained and persistent notion of computers as tools for personal liberation, the actual efficacy of which has been the subject of much debate in the time since.

Continuing in Barbrook and Cameron (1996) and Rushkoff's (2016) vein of sober web-cynicism, in more recent years, other writers have drawn attention to the apparent paradoxical political inertia and economic fallacies they maintain follows from technologically-centred utopian thinking. For example, Belarusian researcher of technology Evgeny Morozov has published highly critically on the apparent promise of great political liberation somehow imbued with so-called the digital revolution. In *The Net Delusion* (2011) Morozov writes on the insufficiency of the internet to galvanise lasting change when levered to democratise authoritarian regimes, as evidenced by the series of failed Arab Spring revolutions. For Morozov, the internet – and social media in particular – furnishes users with a gross over-estimation of the extent to which they can use the platform to alter the offline material conditions of their lives. In this sense, he raises the mismatch between the disruptive power of ICT technology to destabilise or overturn authoritarian regimes, alongside the simultaneous lack of effective design and implementation of alternative political solutions – which ultimately leads to failure to achieve lasting social change. Later, Morozov wrote on the pervasive ills of what he calls the

*solutionism* (Morozov, 2013) which surrounds internet-centrism, and the values typically ascribed to the internet *vis-à-vis* society, economy and politics. In this sense, he maintains there is a fundamental disconnect between online versus offline political strategy, fuelled by the shallow, fleeting character of online interactions – and the naïve one-dimensional belief often held by IT ‘visionaries’ that the internet somehow represents an unprecedented historical singularity.

As the accounts listed above illustrate, media and cultural theorists have critically reflected upon mobilisation around the idea of technology (particularly networked-ICT) as an enhancer of conditions of human life, either regarding the assumed potential to revolutionise political and economic systems or to facilitate relevant forms of self-expression as more broadly construed. Further then, beyond these technologically-oriented efforts, a select few attempts have also been made to theorise how the broader parent-concept of Science itself might be a principal instigator (or indeed core focus) of social or cultural movement type activism. The notion of Science as a social movement is most directly addressed by Fuller (2007), who raises the apparent overlap between scientific paradigms and social movements. Specifically, Fuller argues scientific paradigms represent arrested social movements that are captured and hence ‘disciplined’ by one or more interest groups (158). In this sense, both movements and paradigms are essential elements within an endless cycle of overlapping phases of *energisation*, *consolidation* and *dissipation* (170). Ultimately, Fuller suggests organised enquiry must enviably pass through a sequence of movement-paradigm-ideology in its career as a technology of social transformation. In effect, this model offers an account of the extent to which paradigms arrest and contain intellectual and political dynamism. Its focus upon the course is counter to those which valorise the stability of ‘ordinary science’ in the Kuhnian sense. This theoretical account explains how those concrete or accepted outputs of science may have been the product of paradigmatic consolidation by interest groups, which may then come to re-energise in novel ways after attaining superstructural ideological acceptance – for example new communities formed around genetic commonality, i.e. Rose and Novas (2000). However, it has a relatively limited scope when considering the social mechanisms used by actors throughout this process, particularly how those loosely-defined, highly speculative techno-scientific programmes with fundamentally uncertain outputs might provide

the source of inspiration for interest groups, or somehow otherwise be used to incite forms of social-political action. Fuller's analysis is a useful illustration of how the fluid, forward-looking, publically contested social standing of science carries an inbuilt change-oriented directionality with it, which could be seen to represent a kind of never-ending social movement life cycle of sorts (Christiansen, 2011).

On a related note, other commentators such as Jensen (2012) have raised how scientific controversies relate to the struggle of symbolic power. Jensen refers to the symbolization of scientific ideas in the public sphere, suggesting technocratic forces maintain their power through greater access to economic, social and cultural capital to support a set of symbols comprising the dominant Enlightenment myth of science as progress (162). For Jensen, scientific controversies democratise the sciences by shifting the linguistic landscape from a near monopoly of the dominant myth of scientific progress to a more open range of symbols emerging from the communicative rationality of the lifeworld (Habermas, 1987) assessable to scientists and non-scientists alike (Jensen, 2012: 164). As such, he raises the significance of narratives associated with the Enlightenment as essential sources of legitimation for contemporary techno-scientific projects – and the extent to which scientific knowledge and understanding take on a range of additional symbolic significance when widely disseminated and reconstructed by non-specialist actors through media exposure. Correspondingly, Jensen's contributions to this area have focused on how scientific knowledge takes on symbolic and even metaphorical meanings when communicated to publics outside a specialist subfield (Jensen & Weasel, 2006; Wagoner & Jensen, 2010; Weasel & Jensen, 2005). Again, while this body of work goes some distance toward theorising the complex interplay between public perceptions of science and novel forms of symbolic expression made possible through the process of mediation, it does not directly consider the extent to which social mobilisations organised around such interpretations can activate once formed. For this reason, it is an incomplete account of the symbolic meaning social actors ascribe to science and technology, which fails to capture the novel ways actors might actively reconstruct – and choose to act out – their media-derived associations.

To summarise, in the time elapsed since the early domestication of the world-wide-web, there has been much cultural and academic commentary on – and indeed much



cautioning against – simplistic utopian mind-sets centred around the use and application of technology. Equally, the apparently deep-seeded self-transcendent impulses associated with ICT have been well traced. In this regard, as Davis suggests, information technology manages to transcend its status as a thing by allowing for the encoding and transmission of mind and meaning (Davis, 1998: 4). This social constructivist-style claim that subjective symbolic associations surrounding technology work to animate and carry the technological enterprise forward provides a novel framework to analyse the broader symbolic significance of – and corresponding public positions on – science itself in the contemporary era. I suggest transhumanism can be seen to represent an extreme, highly speculative and ideational case of pro-science support and advocacy, arriving somewhere at the nexus between science, technology and human values. On this point, a handful of noteworthy literature has arisen in recent years which has attempted to outline how key sociologically relevant concepts can be seen to relate to technological human enhancement advocacy: The existence of such material is necessary to acknowledge, particularly that which explores the concept of community, post-politics, and the quasi-religious aspects of THEA. These will now be briefly discussed. Exploration of the concept of community is a long-established cannon within the sociology and anthropology, with such studies often tending to stress the positive role of shared values in facilitating forms of intersubjective belonging, such as the notion that interactive social forms organised around certain ambitions can amount to a *community of interest* (Hoggett, 1997). Yet in the social studies of science and technology, quite contrary to any notion of a cohesive function to technology as platform for shared values/belief in strengthening community bonds, some observers have directed attention toward the apparently adverse effects of rapidly advancing technology on human social behaviour (Turkle, 2011). Moreover, there has been distinctly critical commentary within the press on the reportedly cult-like extreme devotional culture formed around organisations advocating technological human enhancement such as *People Unlimited* (Van Velzer, 2014). This claim is at odds with the stated values of free-thought championed by other rationality-centred social groups such as the Effective Altruism community – a philosophy and new social movement that applies evidence and reason to determine the most effective ways to benefit others (MacAskill, 2017).

Equally, political reflections within the contemporary period have been marked by a sense of mounting scepticism towards the political establishment, which have no-doubt emerged simultaneously alongside a broadening of the scope and impact of technology in civic life. Not least, the above is reflected by trends in social theory which have put forward and elaborated on the notion of a *post-politics*, with the suggestion that contemporary techno-political processes have become too complex and fast moving for genuine deliberative democracy (Rosa, 2013). To be sure, such a view echoes commentaries surrounding the apparently highly disruptive character of technological innovation (Christensen, 1997; Kelly, 1994; 2011), and the associated suggestion that emerging technologies work to displace or even altogether dissolve social-structures of stability and order – a viewpoint is radically accentuated in the Accelerationist philosophy associated with contemporary British Philosopher Nick Land (MacKay & Avanesian, 2014). Against this backdrop, an especially noteworthy strand of literature has emerged drawing attention to the apparently quasi-religious aspects of THEA (Smith, 2007; Smith, 2010; Singler, 2017), including those who have written first-hand on their experience with transhumanism as offering a kind of secular remedy for despair over the absence of God (O'Gieblyn, 2017). Similarly, others have remarked upon the conceptual over-lap between transhumanism and theistically-based motifs drawn from the Abrahamic canon (Fuller and Lipinska, 2015; Thiel, 2015). Work in this space to date has largely come in the form of religious assessments of transhumanism, particularly academic scholars of religion's attempts at interpreting religious responses to transhumanists scenarios (i.e. Mercer and Trothen, 2015; Peters, 2011). There is clearly a dearth in material addressing the converse, namely assessments of religion offered by transhumanists. The study will seek to re-address this balance.

Despite several critical commentaries lampooning the ideological excesses of technologically deterministic utopian or liberation-focused world-views, by comparison, there has been very little empirical engagement commencing from the perspective that extreme support for technology and science might itself represent a kind of social movement. Within this framework, the promise of an exponentially better future somehow created through application of technology is a highly meaning-laden *collective action frame*. It is apparent a great range of sophisticated symbolic ideals – which are not necessarily rational, but rather can be emotionally or

even spiritually derived – contribute towards enthusiasm and support for emerging technologies related to human enhancement. Such highly elaborate and normatively loaded visions are no doubt also contrary to the self-understanding of the sciences, which typically pride themselves on the communication of technical meanings based upon objective empirical observations (Jensen, 2012). All things considered, meaningful future research into transhumanism requires a theoretical approach sympathetic to accessing and deconstructing the intersubjective values and beliefs which comprise the movement. Frame and narrative analysis modes of contending with new social movement forms are fitting analytic approaches for this purpose, as transhumanism and THEA can be productively subjected to both, ultimately to elicit the conventions actors use over the course of constructing, qualifying and advancing their activities and visions for the future. Engaged empirical work influenced by the symbolic interactionist theoretical tradition clearly has much to offer these debates.

## CONCLUSIONS

This review of the literature has demonstrated, despite some theoretically-based insider accounts produced by those sympathetic to the transhumanist cause, there is currently a lack of impartial scholarly engagement with transhumanism, least of all empirical-interpretivist studies addressing the novel combination of social-psychological and operational factors surrounding transhumanist practices, as evidenced in recent coverage of the movement. In other words, the complex motivational-systems and types of mobilisation associated with THEA – as well as the various political conflicts and existential assumptions which might be commonly held together in tandem with advocacy for technological human enhancement – have not yet been adequately addressed within academia. That said, the body of work associated with new social movement theory (NSMT) has recognised how forms of collective action in the contemporary period have moved increasingly toward issues of identity and quality of life – as well as the variety of psychosocial and politico-strategic factors which might attract participants toward social movement activity. As such, social movement theorists have developed theoretical models to help researchers analyse present-day social movements, the likes of which are relevant and applicable to the study of transhumanism. These modes include the symbolic-

interactionist derived framing theory and narrative analysis, both of which represent attempts to capture and account for the qualitative-symbolic constructs and intersubjective associations which surround social movement actors and activity.

Not least, a preliminary look at canonical transhumanist literature reveals that the histories which advocates put forward surrounding the origins of the transhumanist movement are themselves comprised of various narratives, which attempt to situate transhumanism seamlessly within the broader chronology of human existence. From a critical scholarly perspective, given the sympathies for transhumanism held by certain academic commentators, it is necessary to discern between internal (i.e. transhumanist) accounts which appear geared toward legitimating the movement, versus other external (i.e., outsider/journalistic) accounts which are more critical and disparaging of transhumanist ambitions. Despite external criticism, since the dawn of the last millennium, transhumanism has continued to propagate around the globe and grow increasingly organised – no doubt aided and abetted by the user-generated content of Web 2.0 – and some of its more activist supporters have launched SMO-based efforts to introduce transhumanist ideas into the mainstream political discourse, yet transhumanism continues to divide opinion. To the cynic, transhumanism is perhaps nothing more than interest in fringe science taken to fanciful excess. By contrast, those with declared sympathies for the cause writing within academia would sooner believe it represents the latest in a long line of attempts at self-transcendence which they reckon have long marked the course of human history. The sharp disparity between such accounts testifies to the contested standing of transhumanism at present – reflected in similarly ambivalent existing scholarly commentaries, i.e. Ranisch and Lorenz Sorgner (2014) – an altogether suboptimal state of affairs, surely made worse by lack of direct empirical engagements with those who constitute the movement.

Ultimately, this review concludes with the finding that existing social-scientific work in the technological human enhancement advocacy (THEA) space has tended toward theoretical analyses of transhumanist scenarios, and broader-based commentaries on the suspected drivers behind radical support for technology in the twenty-first century. These accounts have typically focused on the role of ICT as a vehicle for altered human self-understanding, and the chequered promise of new digital media

to disrupt existing political-cultural and social systems. There has been a lack of high-quality studies examining the social composition of transhumanist groups, or indeed qualitative, empirically-driven research addressing the range of normative assumptions driving THEA today. Per the review of literature presented here, it is topical to examine how symbolic meaning arises and is used within cultures of advocacy surrounding new emerging forms of science and technology related to human enhancement. Equally, it is relevant to discover how transhumanist-type actors construct and reconstruct such yet largely undetermined techno-scientific matters in question on their own terms. Despite a general lack of high-quality empirical research into the social and ideational forms associated with transhumanism, a select few existing models of technological utopian thinking have been developed both inside and outside of academia, typically with direct reference to – or at least substantial impetus from – technological cultures based on the West Coast of the United States. While interesting, these accounts neither address how such visions are carried forward in relation to broader technological schemes beyond ICT, nor do they reflect the global dispersal of THEA, and how such ideals may be acted out differently across various settings. As such, it is of relevance to examine transhumanism – alongside other relevant subcultures formed around technological human enhancement advocacy more generally – taking influence from NSMT and using qualitative-interpretive methods to gain knowledge and understanding of these under-researched areas.

Undoubtedly, for the purposes of this literature review, it has been helpful to draw the above distinction between academic, journalistic, and insider transhumanist-derived accounts of transhumanism and THEA. At first glance, doing so offers a useful heuristic device which assists in characterising the institutional background and ideological sympathies of those who have conventionally written on the subject. Under closer scrutiny this analytical scheme breaks down, however, not least because such accounts can often be found over-lapping to a significant extent. As such, it is necessary to clarify how my contribution fits within these proposed existing genres. At a surface level, the study to follow is academic in so far as it has been produced within the institutional context of a university, and has been executed in line with contemporary social-scientific academic norms. That said, it carries some deliberate inflections borrowing from the more lucid and expressive, critical-

investigative tenets of journalism, while also pursuing the richness and depth which can be generated through insider guided participatory methods. Simply put, it seeks to draw on the particular epistemic strengths of each prior established mode of approaching THEA, ultimately to produce work which will add novelty to existing cannon by becoming something greater than the sum of its parts: The result is a highly-embodied study, which subverts the appeals to impartiality and objectivity associated with academic research, instead following the journalistic impulse to tell a critical, engaging story, directly informed by the voices of those who identify with and inhabit the spaces around human enhancement through technology. The next chapter will detail and evaluate feasible research strategies for this purpose.

# 3

## METHODS & METHODOLOGY

This chapter outlines the epistemological, methodological and ethical aspects of the study and presents an overview of the fieldwork techniques used to generate data for the project. The research has been designed to investigate the social constitution of transhumanism and other directly analogous forms of technological human enhancement advocacy (THEA). It is apparent, given the complex and ambivalent standing of THEA raised in the previous chapter, a dynamic and engaged strategy is necessary to generate rich and detailed qualitative insight into the range of complex subcultural forms, value-systems and social movement-type activity organised around the idea of human enhancement via technology. The chapter opens with a justification of multi-sited ethnographically-inspired participant observation as an appropriate method for this study, followed by an account of the approaches' evolution in response to the theoretical areas which emerged subsequently.

I designed the following core research question in the early stages of the project to help orient my exploration into the various social, cultural and ideational constructs surrounding advocacy for technological human enhancement. The study set out to address the following question: How can Technological Human Enhancement Advocacy (THEA) be characterised across a range of the locations where the practice is found? To adequately address this core question, it was then appropriate to formulate the following related sub-questions:

- A) *Who are the constituents of THEA? What kind of boundaries are evoked by this constituency, how are they maintained?*
- B) *What kind of specific goals might THEA be working toward?*
- C) *What kind of political beliefs or belief-systems are associated with THEA?*
- D) *What kind of existential beliefs and belief-systems are associated with THEA?*

In pursuing satisfactory responses to these questions, the research adds novelty to the fields of Science and Technology Studies (STS) and New Social Movement Theory (NSMT) through its creative purposing of the multi-sited ethnographic approach for the study of radically pro-science and technology advocate communities. The result is an in-depth account of the major symbolic and programmatic features which were found to comprise the ideological construction and pursuit of the various technological human enhancement based-hopes, dreams and aspirations for techno-science in the 21st century which I encountered.

The chapter is broken into the following three sub-sections, which reflect the various theoretical and practical considerations which have informed the design and execution of the study. Firstly, it begins by introducing the conceptual framework for the research, explicitly defining the underlying ontological and epistemic assumptions and how these values and theoretical viewpoints informed the selection of methods. Next, it moves to offer a broad-based, descriptive outline the research process as it unfolded in practice, including a detailed chronological account of all fieldwork activities which occurred over the course of the data-gathering portion of the study. Related to this point, I close this section reflecting on the various noteworthy ethical and professional considerations which arose over the course of the project, including the matter of informed consent. The final portion of the chapter recounts the data-processing and analytic aspects of the research. In this section, I move to discuss the data collection and subsequent data processing dimension to the research in detail, including the transcription, coding and analysis of fieldwork data. The section includes a review of the data collection process and the principles which guided its eventual analysis. The processing of raw data, including the transcription of audio onto the development of a coding scheme and manufacture of themes, is discussed. Lastly, I reflect on the process of writing-up which represented the final stage of my analysis, particularly by reference to the conceptual and stylistic overlaps between the genre-form of analytic ethnography and thematic analysis.



### 3.1 CONCEPTUAL FRAMEWORK:

#### Imagining The ‘Unsited Field’

To analyse transhumanism as a new social movement through the Symbolic Interactionist lenses of framing theory and narrative analysis, I chose to adopt ethnographic-styled participant observation as my primary methodological approach to the study. In this sense, ethnographic reports – together with associated forms of ethnographic questioning – serve a single purpose: to uncover the system of cultural meanings that people use (Spradley, 1979). Equally, the research was also shaped by an appreciation of the apparent increasingly complex nature of science, technology and human cultures in the 21st century, and with it the belief that social research methods should be free to adapt and respond as appropriate when meeting such complexity. Accordingly, the project takes a significant level of methodological influence from the multi-sited approach towards ethnography outlined by Marcus (1995, 1998). As Marcus (1995) observes, toward the end of the twentieth century a new methodological trend associated with emerging spheres of interdisciplinary work came to adapt long-standing modes of ethnographic practice to fit more nuanced objects. Marcus forwarded the notion of multi-sited ethnographic research against this backdrop as a strategy to meet the methodological needs brought forth by an increasing focus on globalisation and transnational study throughout the social sciences (e.g. Appaduri, 1991; 1996; Auge, 1995; Featherstone, 1990; Gupta and Ferguson, 1992; Kearney, 1995). Simply put, as social researchers have increasingly reoriented their attention to the “circulation of cultural meanings, objects and identities over diffuse time and space” (Marcus, 1995: 96), focus has shifted from single location research toward *trans-locational* forms of analysis – a move notably also often held in tandem with postmodernist tendencies (Espinoza, N.D).

The practice of ethnography has been a long-established methodological tradition within STS (Hess, 2001). As the field has shifted its analytic focus in recent years, researchers have come to embrace new approaches toward fieldwork practice, with multi-sited approaches developed within anthropology offering a fitting model for the study of scientific and technological cultures in the twenty-first century (Hine, 2007). Following on from the first wave of laboratory studies which examined the

practical day to day enactment of scientific work – i.e. Latour and Woolgar (1986) who framed scientists as a tribe whose beliefs the visiting anthropologist must reveal – a new generation of STS researchers have since turned their attention to broader-based social and political issues. Correspondingly, after critiques emerged questioning the notion that laboratories present bounded cultural entities, the spatiality of science has since become a new topic for exploration (Law and Mol, 2001). This study locates itself within the so-called second generation of STS ethnographies owing to both its trans-locational scope – concerned with a far wider field than the laboratory alone – and its main analytic focus, which goes beyond the social context of techno-scientific knowledge production practices to examine the broader and entirely more nebulous culture and politics associated with science and technology in the twenty-first century.

### *'Doing' Multi-sited Ethnographically-Inspired Work*

Per the literature review presented in the previous chapter, it is topical to examine how symbolic meaning and legitimating power relation are expressed and constructed within social movement-type subcultures advocating for technological human enhancement. At its most basic level then, the research works to explore the various attitudes, values and behaviours it found travelling alongside contemporary ambitions for the explicitly human enhancement oriented application of science and technology. Accordingly, the study carries a set of epistemic assumptions surrounding both the construction of scientific knowledge, as well as how best to make sense of science and technology's complex interrelationship with social-political factors such as culture and power. On this point, the second wave of STS ethnographies have tended to move the construction problem away from knowledge production processes towards how cultural meanings or legitimating power relations become embedded within science and technology (i.e. cultural and political construction) and how different actors interpret science (i.e. reconstruction) (Hess, 2001: 5). This shift in focus – alongside the shared convention for second wave STS ethnographers to also view the knowledge-culture relationship as both-and rather than either-or (Toumey, 1998) – typically carries with it a realistic constructivist belief that the structures of nature and culture co-determine scientific knowledge.

The implications of this onto-epistemic view in the practice of ethnography are clear: although ethnographic accounts are, by their nature, selective constructions, they may nevertheless represent phenomena independently of themselves, and of the researcher, accurately (Hammersley, 1992).

Second wave STS research commencing from a principle of cultural relativism (building on the first wave's strong program principles of impartiality and symmetry) must, – taking heed from what Bloor calls *methodological symmetry* (Bloor, 1991: 176) – begin with the point of view of one's informants. In this respect, the goal I assigned my project from the outset was to try and understand the world from the point of view of my research subjects, and with it ideally, achieve a level of competence in the culture of technological human enhancement advocacy. The study, therefore proceeded in line with the base ethnographic assumption that the best way to understand cultures surrounding THEA is through active participation in the social spaces which comprise the phenomena. Of course, attainment of the kind of rich, deep and meaningful understanding needed for full cultural competence represents an essential tenant of standard ethnographic practice. That said, the multi-sited approach presents some unique practical, methodological and analytic challenges. The onto-epistemically unbounded notion of following an idea, population or topic across multiple locations (i.e. tracking some phenomena horizontally) is entirely contrary to the traditional ethnographic convention in which the researcher is expected to remain in one single location for an extended period (i.e. examining phenomena vertically). There are methodological costs and benefits to either form of 'doing' ethnography, which I weighed carefully over the course of the research design. Ultimately, a multi-sited orientation was determined to be the most appropriate strategy to fulfil my chosen research objectives. The various factors which influenced my adoption of multi-sited approach will now be discussed.

A range of considerations are necessary when designing social research, especially projects which attempt to examine intricate qualitative spheres such as culture, politics and human values. Given the recent trend in STS thinking which suggests a bounded, isolatable field for science is both unrealistic and inappropriate, and my focus on the loci of culture, power and reconstruction of techno-scientific knowledge and understanding, I opted for a multi-sited ethnographic approach to balance both

the conceptual and practical needs of the project. As mentioned, multi-sited research has at least one substantial advantage over traditional ethnography in that, at least in principle, it allows the researcher to experience multiple-manifestations of socio-cultural phenomena as they are disbursed across both space and time – in a fashion which effectively complements the complex and multi-faceted quality to advocacy surrounding new forms of science and technology in the contemporary period.

With multi-sited fieldwork, the researcher typically has far less time at each site, and with each localised population, thus having fewer opportunities to get to know people and their social worlds, establishing the depth of social relationships necessary to access and assimilate their fields of existential experience (Berg, 2008). This significant limitation must be intelligently approached analytically and addressed directly through varied and versatile research practices, implemented for their appropriateness to sites, questions and situations. Correspondingly, multi-sited research was characterised by Marcus (1995) as an approach where the ethnographer becomes a continually engaged *circumstantial activist* over the course of their ethnographic journeying, embodying a type of activism which is responsive to the conditions of the research as it unfolds. In this regard, the creation and adoption of a *multi-sited imaginary* reflects the constructed character of research projects as a series of active interventions into the social world. In this sense, my use of the multi-sited approach required a range of negotiations – continually reconsidering my identity as an ethnographer and managing my research commitments – over the course of interacting with a range of subjects and travelling between a variety of fieldwork sites. Ultimately, these negotiations enabled me to exert a high-level of personal agency over the project, remaining fluid and adapting my analytic focus and research direction in response to experiences of the field.

In line with Stausses (2000) vector-matrix framing of trans-locational ethnography, my field practices develop gradually from the linkage of concepts related to spheres of activity. These spheres were used to produce an analytic matrix of linked or intersecting vectors, the interactions between which I then analysed in effort to explain my core phenomenon – Technological Human Enhancement Advocacy. Importantly, in view of the boundless spatiality of techno-science, use of a vector-matrix framing can allow anthropology (or indeed STS) to avoid the binding of

cultural forms to peoples and places (181). The four discreet spheres of activity or significant thematic categories (Constituents, Mobilisation, Politics, Existence) which were used to form vectors within my analytical framework are themselves sizable research constructs deserving careful reflection. In simple terms, this research has been multi-sited in the sense that I have gone to a range of different places and proceeded to explore the four above-mentioned prominent aspects of THEA – which ultimately comprises my core trans-locational research phenomena. That said, the array of personal choices that went into constructing, operationalising and eventually enacting the study in this manner are numerous and bound up in layers of complexity. Accordingly, I will now recount the major decisions and corresponding rationale which guided the project.

### *Selections: Choosing Sites and Subjects*

Firstly, and of foremost importance, was the challenge of adequately defining the multi-sited imaginary to be examined. The multi-sited imaginary represents a dynamic knowledge form, and as such, the specific foci of the study evolved somewhat organically over the course of the research process. Marcus (1995) lists various modes for constructing a vision of multi-sited spaces for the researcher to traverse, which he suggests can comprise a chain of locations reached through following people, things, metaphors, plots/stories, lives and conflicts. In this respect, according to Marcus' proposed pathways, I began by practising a combination of *follow the people* (i.e. Self-avowed Advocates for Technological Human Enhancement) and *follow the metaphor* (i.e. Human-enhancement via Technology) during the initial site-selection for the study. The practice of following the people was useful at the start of the research, particularly when attempting to parametrise a field, with the research setting out to examine advocacy for the broad collection of science and technology-oriented beliefs travelling under the banner of *transhumanism* and the related descriptor *transhumanist*. These reasonably well-formalised iterations of THEA provided a practical anchor point to ground the project. At first, these terms worked well to capture what I was interested in: the radical visions, distinct narratives and new notions of culture and identity built around the transcendent promise of science and technology in the 21st century.

During the initial stages of the research, however, it became apparent transhumanism and indeed transhumanist are highly contested terms with an apparently ambivalent social status and even, for some, distinctly stigmatising connotations. In effect, those who overtly describe themselves as transhumanist and explicitly express allegiance to transhumanism are only one subset of a much broader *techno-optimistic* scene. As such, those who self-identify under these terms are not necessarily reflective of all human technological enhancement advocates or advocacy groupings. As one early informant neatly puts it:

*“The most interesting people often do not self-label as transhumanists or anything at all. They just do stuff worth doing.”*

**(E-mail correspondence with Respondent RP).**

After it became apparent that my area of concern included but was not limited to those who formally self-identify with transhumanism, it became necessary to adapt my approach to include perspectives of those involved with, transhumanist-type activity but may – for whatever reason – be unwilling to formally identify as such by name. This classificatory issue is discussed in greater detail in the Constituents chapter to follow. With this apparent tension in mind, I went on to later design a separate interview schedule which followed an alternative-yet-parallel course of questioning depending on whether the respondent expressed that they identified with transhumanism. In this sense, the interview scheme gave respondents the option to disavow transhumanism and instead proceed with a comparable line of questioning centred around the potentially less loaded expression ‘Technological Human Enhancement’. With this tactful methodological adjustment, it was possible to broaden the scope of my research to include non-transhumanists, and generate accounts and perspectives from both inside and outside of transhumanism.

Correspondingly, next came the process of working to *follow the metaphor* during which I selected and moved between sites where discussions were taking place around the notion of human-enhancement-via-technology as a general mode of thought. This type of following allowed me to broaden the scope of my experience away from transhumanist communities alone, and gain perspective as to how other

advocates approach the prospect of technological human enhancement in wider social settings. Sites in this respect included private technology companies, media and marketing agencies, futurist community group meet-ups, university campuses and the UK Houses of Parliament. Finally, Strauss (2000) adds *follow the practice* to Marcus' list of multi-sited imaginaries, suggesting the history and social life of a set of practices – conveyed by people, books, pamphlets or other printed text, and moving images like video or television (181) – can constitute a distinct research vector. Again, to effectively *follow the practice* as Strauss suggests, it was necessary to parametrise the specific social practice or set of practices that were to be of primary interest to the study. In this respect, I followed the practice of deliberate attempts at human-enhancement-via-technology. This vector allowed me to move beyond strictly metaphorical discussions otherwise confined to the realm of discourse, and onto the practical, real-world enactment of attempts at human enhancement through technology.

Understandably, a substantial critique of multi-sited research is how the researcher might approach the selection of sites that are of genuine relevance to the ethnography (Hannerz, 2003). As mentioned, the practice of multi-sited ethnographic work essentially entails the gradual, accumulative creation of multiple field sites (207). Beyond the initial, directional guidelines that I used to begin the formation of my multi-sited chain (following the people, metaphor and practice), over the course of the fieldwork I attempted as far as possible to suspend judgement on the appropriateness of various sites. Instead, I worked to simply engage with the various situations that I found (de Laet and Mol, 2000). This approach allowed me to follow a trail that could not have predefined, and therefore with it tell a story that is faithful to the experience of *mess* (Hine, 2007). I hoped by proceeding without an overly defined idea of what the most interesting features of the field *ought* to be, I would be able to somewhat minimise the inevitable bias and exclusion of important aspects of the situation by superimposing the methodological stances of the social sciences upon the fundamentally complex reality I encountered. In this respect, the study design took influence from Law's (2004) *After Method* and the suggestion that social research approaches should thoroughly examine the directions methods push us in – and all social research should start from a proposition that methods in social

science are constitutive of, rather than reflective of social reality (Law and Urry, 2004). Correspondingly, throughout my site selection I remained mindful of my own agency as an active constructor of the reality I encountered, and with it the dynamic status of methodological adequacy as a negotiation for a set of circumstances (Amit, 2000).

Field-site selection comprised a deliberate combination of chance and design. Initial sites were selected in line with my People/Metaphor/Practice specification. Beyond these initial criteria for site-selection, once the research had begun moving I went on to fully embrace versatility across my field practices. Subsequent locations were then often appropriated based on recommendation by informants whom I made close personal connections with, and followed to various THEA events both within the UK and internationally. In so-doing, I operated with the firm conviction that the ethnographic field needn't correspond with a spatial entity of any kind, nor comprise some holistic entity 'out there' to be discovered, but rather is the sum of the researcher's choices surrounding a set of analytic objectives – what Cook, Laidlaw and Mair (2009) call an *un-sited field*. This self-consciously accommodating framework enabled my fieldwork activity to include a breadth of experiences, which ranged from attending conferences, being present in virtual discussion groups, reading an array of technical literature, developing long-term relationships with and interviewing both experts and laypeople about their perceptions of both transhumanism and technological human enhancement advocacy more generally. That said, it is necessary to recognise the geographic bias inherent within the set of field-locations visited, which were based primarily within the US and UK. As such, it is important to acknowledge how the observations, interviews and analysis to follow do not attempt or claim to capture the full range of how transhumanist ideas might be received, interpreted and enacted across the rest of the world. In other words, the project itself must be *framed* appropriately from the outset according to full-awareness of the inherent limits – inevitably stemming from its various practical constraints and circumstantial bias. The influence of these factors upon the project is discussed at greater length in the concluding chapter. I will now offer a detailed chronological account of the main empirical activity and strategic interactions which formed my research practice.



## 3.2 RESEARCH PRACTICE: Moving Between Sites & Subjects

Over the course of this study, I have undertaken ~250(+) hours of participant-as-observer type fieldwork activities, including the production of 100+ pages of observation notes and a visual ethnographic capturing of ~150(+) still images at various sites. I also collected ~17(+) hours of Audio and ~25(+) hours of Video Data (both Primary and Secondary captures) from a range of functions related to Technological Human Enhancement. Additionally, I joined and observed a total of 26 online discussion groups through Facebook, and three email discussion lists. Regarding more direct interventions into the field, I have also conducted 21 discursive interviews, amounting to over 16 hours of audio, as well as designing and electronically distributing a qualitative survey which received a further ten written responses. The fieldwork lasted just under three years and divided into four main parts:

- A period of initial exposure to field sites and networking (February 2015 → August 2015).
- A period of pilot study (August 2015 → December 2015).
- A period of more focused participant observation (January 2016 → December 2016).
- A period of formal interview and survey based data gathering (August 2016 → August 2017).

My entry into the field started February 2015 when I first began attending academic events in London to get a sense of the scholarly discourse around the topic of technological human enhancement, and introduce myself to significant actors working within this space. This early phase allowed me to initially sketch out conceptual areas and corresponding threads to follow when later embarking on the fieldwork in a more systematic fashion. The following section presents a broad-based overview of the entirety of fieldwork activities undertaken over the course of the project. This section splits between two subsections: the first is a chronological narrative account reflecting in detail upon the breadth of activity conducted

throughout the different phases of the project, the second is a more detailed account of the purposeful interventions I designed and undertook which were appropriate at different stages in the research process.

### *Overview of Fieldwork Activities*

The first site I visited during the initial exposure phase of the study was the London School of Economics Literary Festival: *Visions of Future Humans: Science Fiction & Human Enhancement*. The event examined narratives around technological progress in literature and featured highly-regarded futurist panellists such as Anders Sandberg (Future of Humanity Institute, Oxford) alongside others who were entirely more critical of technological utopianism, such as Caroline Edwards (Birkbeck, University of London). This experience introduced me to scholarly and critical perspectives toward narratives around Human Technological Enhancement, as well as wider public perceptions surrounding the topic through audience questions and informal discussions afterwards. Next came the University College London event titled *TECHNO-LIBERATION: Can technology contribute to social equality?* in June 2015, which included a presentation introducing transhumanism as a political philosophy delivered by Chair of *The London Futurists* meetup community David Wood, who proved to be a key gatekeeper later in the study. Again, this experience prompted me to recognise the contemporary politicisation of transhumanism/THEA, which would become a significant theme and distinct area of analysis which later emerged from the research. These two preliminary exposures allowed me to generate early insight into the field in a relatively non-invasive fashion while I still in the process of designing and seeking appropriate formal ethical approval for the fieldwork to follow.

Later in the year, during early August of 2015, the fieldwork entered a more active pilot phase comprised of further observation and initial interviews. This phase started when a peer working in the field of Science Communication who I'd met at a conference some years before invited me to attend a series of technological human enhancement-oriented science and technology focused events in New York City.

Upon arrival in New York I attended a public event on the Future of Artificial Intelligence – hosted at Lower Manhattan marketing analytics company *Shareablee* – organised by my contacts close friend and flatmate Alex Klokus, founder of meet-up group Futurism NYC, followed the next day by an invite-only closed event at IBM’s Watson discussing the relationship between humans and non-human machine agents. Spending time in New York over the course of this week allowed me to get to know some of my contacts peers who were engaged in the emerging technologies space. Most notably including Futurism NYC's Alex Klokus, Founder and CEO of *Open BCI* (Conor Russomanno) across a range of more relaxed and informal settings, alongside interesting local opportunities such as the invitation for a tour of lower Manhattan-based digital marketing agency *isobar* by MIT-graduate Engineer and Inventor Leigh Christie. This phase of pilot work allowed me to more fully enter the field for a sustained period in further engaged ethnographic fashion, holding informal conversations with human enhancement-oriented technology advocates that would later influence my interview design.

Moreover, then, in the process of continuing to *follow the people* (I.e. Transhumanists, and Technological Human Enhancement Advocates) and the Metaphor (I.e. Human-Enhancement-via-Technology) I went on to adopt a more systematic approach toward participant observation and data-gathering when commencing fieldwork proper from January 2016. The main portion of fieldwork in this respect began by regularly attending *The London Futurists* community group meetups in January 2016, a group which I had learnt – through virtual experience of organiser David Wood's online Google Hangout discussing the *HPlus Pedia* Project – served as something of an informal hub for the *Transhumanist Party UK* (TPUK), a fledgling political formation set out to advocate for positive social change through the strategic application of technology. Upon declaring my status as a researcher and garnering approval from David (at that time, himself Treasurer of TPUK) I was given permission to use the Monthly London Futurists meetup as an opportunity to conduct research, and introduced to the figures with the London Futurist community who were active within the TPUK – Most notably IT professionals Alex Karran and Chris Monteiro who at that time occupied the Director of Nominations and Director of IT roles respectively. When embarking on further participant observation of the London Futurist events, I took the cue from Mack et al. (2005) and produced notes

focused on overt categories such as appearance, verbal and physical behaviour and gestures, and 'People who stand out' when observing the interactions between attendees. In addition to these concerns which corresponds with the thematic area of Constituents, I was also sure to record anything of apparent relevance to my other preliminary analytic categories of Mobilisations, Politics and Existence. To maintain a degree of objective impartiality and detachment when producing this documentation, I self-consciously worked to document what I observed, being sure to distinguish it from my expectations of what I observed (23).

Over the course of preliminary interactions with self-avowed transhumanists – both in the formal London Futurist meetings and the more informal social opportunities afterwards – I began investigating and reflecting upon the nature and status of transhumanism as it was self-defined by those who identify with the movement. Also during January, my contact referred me to Laurie Ramsell, an artist in residence associated with *Birmingham Open Media* who was working on an art project encompassing trans/post-humanist themes. I was invited to attend a group consultation discussing the underlying conceptual issues at hand, and suggest some appropriate creative directions for the work. This allowed me to meet and interact with other interested parties from different fields of expertise – from Illustration to Post 1980's English Literature – who had been recruited to provide input at the meeting, considering how renderings of technological human enhancement are imagined and artfully produced. In February, I attended another technological human enhancement focused event in the form of a *Virtual Futures* Salon hosted in London's Soho, at which point I met Gian Volpicelli – journalist for *WIRED UK* and *Motherboard* who I learnt was himself sympathetically following developments surrounding transhumanism – and who was a source of valuable leads and insight over the year to follow. Similarly, a few weeks later I approached and arranged to meet *Telegraph* Journalist Jamie Bartlett – at that time probably the most eminent media professional covering transhumanism in the UK – in London where we had an informal conversation about Transhumanism/THEA, and discussed potential strategies for gaining access to relevant advocacy groups. I continued to keep up to date with the London Futurists activities throughout this month, including virtual attendance at their Google hangout *Politics and the Future* panel.

At the beginning of March, I attended a three-day conference hosted at Trinity College, the University of Cambridge titled *Transhumanism: Resituating Humanity* advertised through the London Futurists newsletter. The conference was an ambitious event facilitated by a student-led Philosophy group titled *Apotheosis International*, a practical-ethics focused organisation with charitable status attempting to address matters of normative import through academic and public discourse. I was accommodated overnight on the floor of a third-year medical student's dorm room within Claire College alongside two other attendees while visiting this conference, and went on to form a lasting relationship with the student organisers. In addition to participating in the formal programme of activity for the conference – which included panels on transhumanist ethics, Artificial Intelligence and longevity – I spoke informally over lunch with the panellists. These participants included transhumanist-ethicist David Pearce, Chief Technology Officer, *BioViva USA* Avi Roy, and associate director of *Deep Knowledge Life Sciences* Charlotte Casebourne and Moldovan Oligarch and Managing Partner of disruptive biotech investment fund *Deep Knowledge Ventures* Dmitry Kaminskiy. This conference, which set out to consider the potential application of cutting-edge techno-science in the interests of addressing normative questions related to philosophy and ethics, provided me with an intense immersion within an academic-intellectual group facing the political and ethical dimension to technological human enhancement. Also, the event introduced me to the rationalist community, and its allied groups such as the effective altruism movement.

I spent the month of April focusing back on the London Futurists, including conducting a pilot interview via Skype with Chris Monteiro and attending a meetup titled *Constructing a Roadmap to Immortality?* with Russian transhumanist Alexy Turchin. Next, in May I was invited by an associate to attend the UK Houses of Parliament for a parliamentary committee meeting to mark the launch of the Digital Bill of Rights Campaign. While in London for this event I then went on to attend a conference titled *Cyber Party: Popular Politics in Digital Times* hosted by the centre for Digital Culture at Kings College London. The following months of June and July 2016 were spent designing a formal interview schedule and recruiting informants via email in advance of a planned visit to the West Coast of the United States with

several members of the London Futurists who I'd formed close relationships with. The purpose of this trip was to begin undertaking the final portion of the research, a period of semi-structured interviews with a variety of actors involved with technological human enhancement, as well as further participant observation at various California-based THEA events.

The first phase in my experience of the West Coast Futurist Scene came in the form of attendance at RAAD Fest – an acronym standing for Revolution Against Aging and Death – a three-day consumer-medicine type conference in San Diego, California which purported to be the largest gathering of self-described *immortalists* to date. After initially becoming aware of the event through the London Futurists newsletter I emailed the organisers and volunteered to cover the event in an academic/journalistic capacity and was granted a press-pass. During this conference, in addition to participating in the scheduled events, I also made use of the designated press room to interview influential figures within the transhumanist community. These respondents included Biomedical Gerontologist Aubrey De Grey, Artificial Intelligence expert Ben Goertzel, U.S. Presidential Candidate for the Transhumanist Party Zoltan Istvan, Life Extension Lawyer Paul Spiegel, and author and illustrator of transhumanist children's book Gennady and Wendy Stolyarov. Next came a week in San Francisco, where I interviewed nootropics designer Abelard Lindsay, and former President of the *Stanford Transhumanist Association* Andrés Gomez Emilsson. I also attended an event organised by the *East Bay Futurists* meet-up group and interviewed the group's founder Scott Jackish, an opportunity which allowed me to make comparisons with my experience of the London Futurists. I attended a two-day annual *Rejuvenation Biotechnology* conference organised by the SENS Research Foundation at the *Buck Institute for Research on Aging* in Novato, CA upon invitation from Aubrey De Grey. Finally, on route to the UK, I stopped at New York to interview Philosopher of the Posthuman Francesca Ferrando.

Over the course of September through to December 2016, I continued my research attending a couple of additional field sites. These sites included the European Premiere of transhumanist themed documentary film *The Future of Work and Death*, an independent feature directed by Sean Blackwell and Wayne Walsh at the 38th annual Raindance Film Festival and David Wood's *Transpolitica* one day conference

exploring the future of politics organised by the London Futurists. Additionally, I also conducted some further interviews both in person within the UK and via Skype, and distributed an electronic survey to the remainder of the prospective respondents whom I had approached – and had expressed an interest in participating in my research – but had been either unwilling or unavailable to proceed with an interview. Lastly, I returned to Southern California for RAAD Fest in August 2017, which allowed me to experience the conference proceedings again to compare with the previous year – and conduct some final interviews. These concluding interviews included Aaron Traywick of *Ascendance Biomedical*, Neal Vanderee of the *Church of Perpetual Life*, Joe Bardin of *People Unlimited*, and David Wood of the London Futurists. This trip marked the final stage of my fieldwork/data-gathering process. Having offered a descriptive overview of the variety of activities that comprised the project, it is now appropriate to reflect more critically on my specific interventions into the range of field-sites I encountered, and data-gathering techniques I employed along the way.

### *Interventions*

The project uses a multi-sited ethnographically-inspired approach to examine features of the symbolic culture and subcultural forms surrounding advocacy for technological human enhancement. The appropriateness of ethnography as a research strategy follows both the projects interactionist concern for the complex, as-yet tentatively understood symbolic processes underlying THEA, as well as broader theoretical and methodological trends in anthropology and STS. LeCompte & Schensul (1999) suggest ethnography is especially suited for research where the phenomenon is unclear, complex and embedded in a social system that is poorly understood or unknown. By way of attempted resolve, ethnographic practice then entails prolonged immersion in the life-world of those actors who constitute a given community or subculture, allowing the researcher to directly experience, and thus place, the chose phenomena in their rightful social and cultural context. In the process, the ethnographer typically relies on three main sources of data to achieve intimate familiarity with the culture of interest: observation, participant-observation and interviews (Prus, 1996). As Rock (1979: chp 6) has argued, participant observation, using the self of the sociologist as a tool to explore social processes, is

perhaps *the* pivotal strategy of Interactionism: Other such literature discussing the suitability of ethnography as an empirical method for advancing symbolic interactionist theory has emerged in more recent years (Prus, 1996; Rock, 2001). Prus (1996) suggests an ethnographer engaged in a study using a symbolic interactionism lens should attempt to be cognizant of: the intersubjective nature of human behaviour, the interpretations that the actors attach to themselves, other people and other objects that they interact with. As Tan, Zhu & Wang (2003) recognise, principally this involves paying attention to: 1) the ways in which the actors do things on both an individual and interactive basis; 2) the attempts that the actors make to influence (as well as accommodate and resist the inputs and behaviours of) others; 3) the bonds that actors develop with others over time and the ways in which they attend to these relationships; 4) and the processes, natural histories or sequences of interactions that actors develop and experience over time.

In practice, the study was designed to enable each component to my ethnographic field practices to capture rich descriptive data related to the above remit of symbolic interactionist type concern. As typical of ethnographic strategy (Prus, 1996), I relied on the above-mentioned three main sources of data to achieve intimate familiarity with the culture which surrounds transhumanism and THEA: observation, participant-observation and interviews. Specifically, in terms of observations, through my observation notes I attempted to detail the various ways actors I encountered appeared to be performing transhumanism and THEA on both an individual and interactive basis: these relatively detached symbolic judgements I issued based on what I saw enabled me sketch out the field, and build an initial sense of my interpretations of the social processes which I deemed were at work. Further then, my participant-observation represented an a more engaged and protracted effort to detail sequences of interactions as they unfolded over time. This direct participation in a variety of activities related to technological human enhancement advocacy allowed me to experience, and try to account for, actors attempts at influencing the behaviour of others, and indeed self-modifying their own behaviour based on outside influences. My observations essentially involved observing group behaviour, and taking descriptive notes on activities at specific locations structured according to the pre-defined categories: Constituents, Mobilisations, Politics, Existence and Misc. These areas of observational focus were determined though



consultation with relevant literature (presented in Chapter 2) and further clarified through preliminary field experiences. Lastly, and later in the overall research process, my interviews were designed to explore the interpretations and intersubjective bonds actors raised toward the behaviour of themselves and others. These semi-structured interviews and electronic surveys were employed to help fill observation gaps, following a schedule which I designed after identifying key subthemes from my preliminary field observations.

Overall, I found the process of negotiating access to the relevant field sites and gaining a standard of acceptance within groups, as detailed in the section above, was relatively straightforward, and I felt able to build rapport with my research subjects quickly. I was conscious of how my social and cultural background as a white, middle-class academic male could perhaps automatically amount to a kind of insider status among my research communities. On this point, I feel I have occupied an ambivalent space between insider and outsider over the duration of this project. I was perhaps welcomed inside the groups I encountered perhaps by bearing a socio-cultural identity which might be considered somewhat typical of those participating within such communities. That said, I also felt sufficiently outside in so far as I have never considered myself especially committed to the technology-focused values which I found often held in tandem with this involvement. As Hodkinson (2005) suggests in his study of youth subcultures, the insider versus outsider binary can impose significant limitations upon a researcher's viewpoint, and given the complexities of personal researcher identity, any use of such distinction should be in a non-absolute sense. Accordingly, I recognise my status both as an individual who began from a position of feeling somewhat cautiously optimistic about the future of emerging technology, but also as a researcher mindful of the issues which can arise from becoming too close to the culture of study.

I reached respondents through a combination of opportunity and snowball sampling. Initial contacts were sourced through participation in the London Futurists group meet-ups, with a range of additional informants after that gained through existing informant peer-referrals, contacts I met at field sites, and email recruitment where I could identify apparently relevant persons who had made their contact email address public. A combined total of 33 participants were directly involved in the study

through a combination of semi-structured interviews and qualitative surveys. Interview data was collected through audio recording over the course of 19 semi-structured interviews with a combined total of 23 informants. I conducted the majority (17) of these interviews in person, with a small minority (2) held online via Skype. The length of meetings ranged from just 20 minutes to over 1 hour and 20 minutes, averaging around 45 minutes in duration. The interviews conducted in person took place across a variety of locations ranging from public settings such as cafes and bars, to more private venues such as media interview-rooms and the personal homes of informants. Later then, towards the end of my data gathering process, in the interest of broadening the range of participants, a qualitative survey designed to approximately mirror my interview schedule – albeit amended slightly based on the result of my preliminary interviews – was distributed via email to each of my remaining prospective participants. This survey received ten additional responses.

A challenging aspect of all ethnographic fieldwork is to define the timescale of the project, particularly time spent in the field overall, and indeed the length of time spent with a group (Hammersley and Atkinson, 2007). As Marcus (2005) notes, it is the dimension of temporality rather than a place that primarily situates and frames multi-sited ethnography. In this respect, my choices surrounding when to enter and exit various field sites – as well as my decision to finally resign myself from the field more broadly – were the product of a range of practical as well as strategic considerations and constraints. Traditional ethnography has stressed the importance of a prolonged stay in a chosen field, with classical cultural anthropologists typically having spent at least one, two or even more years at a single site before claiming to have reached an understanding surrounding their culture of study. As Nadai and Maeder (2005) point out, one project would probably take up a decade if this approach was used in multi-sited research, with researchers likely incurring significant difficulties in achieving funding for such an elaborate and prolonged venture. By way of resolve, they recognise contemporary sociology operates with a distinct concept of culture which is different from that of classical cultural anthropology. Typically, in sociology culture then tends to be viewed as shared webs of meaning in language and interaction rather than an all-encompassing theory of society. Instead of attempting to follow this classical model of culture, multi-sited

research should be necessarily responsive to the diverse conditions of the sociological field. It is completely inevitable, given the nature of multi-locational work, that within multi-sited research the depth of focus will vary from site to site. In this sense, the time spent at each locale reflects the cultural terms under which natives in this field meet and interact. Simply put, the phenomena of central importance to my study (i.e. Technological Human Enhancement Advocacy) manifests across a range of social settings intermittently, with a tangible field site – such as a conference or a public meetup – only emerging occasionally. As such, proficiency in this altogether more nebulous type of sociological culture can – and indeed should – be gauged in different terms.

In Marcus's phrase, the standard of rigorous ethnographic quality means 'being able to inform someone of your own community (scholarly or otherwise) what is going on in the frame of your project and field site to the full extent of his or her curiosity' (1998: 18). A significant factor which influenced my decision to halt fieldwork activities was the conviction that I had achieved the hallmark of what Hess (2001) calls 'good' ethnography of Science and Technology, namely having developed near-native competence in the technical aspects of the different forms of science, technology and mobilisation involved with THEA. In practice, this meant working to build not only the ability to understand the content and language associated with the field, but also the ability to analyse such contents competently concerning the specific social relations, apparent power structures, cultural meanings and history of THEA. To achieve this within the designated time frame of this study – and given the inherently transient nature of my field sites – I had to rely much more heavily upon formal interviews in the place of observation to gain an in-depth understanding of what was going on in the field. As Nadal and Maeder (2005) recognise, although less time spent at field sites may consequently incur a loss of descriptive details, this must not be considered as the result of a rushed ethnography and therefore bad research. Rather, it follows from the researcher's intentional theoretical decision to purposefully restrict the description to central concepts, and omit contextual details. This approach can amount to an analysis which offers what might be considered a poor description of everyday life in the field, but nevertheless stands as a source of valuable insight into a noteworthy social phenomenon.

Many ethical considerations went into the research design to ensure a high standard of professional practice. Throughout the project, I was open about my status as a researcher, disclosing it to those with whom I interacted. In the case of participant observation and visual image capture, I recognised that in practical terms, a researcher cannot realistically expect to gain full informed consent in the case of large groups of people. That said, I did make reasonable efforts to select images that did not feature faces and other identifying characteristics as far as possible, and always sought formal permission from organisers when taking audio/visual captures during private events. When recruiting respondents for the formal interview and survey portion of the study I was careful to register full informed consent, offering a participant information sheet and requesting the completion of a participant agreement form before commencing with the interviews, and including surveys in my final analysis. In the case of my formal conversations with respondents, I produced verbatim transcripts which were then sent to the individuals(s) for approval to ensure they had not been misunderstood or misrepresented during the transcription process. When it came to speaking more informally to people at sites, in addition to fully disclosing my status as a researcher, I was also sure to emphasise that persons were not at all required to talk to me, and indeed that there would be no adverse repercussions if they did not. Concerning anonymity, I included the option for interview and survey participants to not to have any overt identifying characteristics disclosed in the research. Most respondents were happy to be formally identified, although in instances where this was not the case I was careful to honour this request as far as practically possible. Also, while producing observation-based notes and memos following casual conversations, I limited the production of descriptive data which identified specific individuals by person unless it was pertinent to do so.

### 3.3 PROCESSING DATA: Crafting an Analytic Narrative

Immediately after starting to produce observation field notes, analytic memos and other forms of qualitative field data, I entered the data processing and analysis phase of the study. As mentioned, one substantial form of data generated during the fieldwork was an array of observation notes, visual imagery, and print-based

materials gathered from various field locations. Regarding observations, I produced hand-written notes describing in detail the formal functions I attended, as well as capturing my thoughts, feelings and reflections after the interactions I had with individuals in more casual settings. I also took many photographs at what I deemed to be significant moments over the course of attending field sites, and collected a range of print-based including leaflets, brochures and magazines produced by various individuals and groups advocating for technological human enhancement (GATHE). This eclectic material was gathered to serve as *aides-mémoires* prompting vivid and purposeful reflection over the course of the ensuing further fieldwork and analysis, with these visual objects I both found and created offering me a powerful means to capture and reproduce cultures formed around technological human-enhancement (Hine, 2000).

During the initial processing of raw observation data and artefacts collected during visits to field locations, all written observation notes were scanned from fieldwork diaries as soon as possible to electronically preserve the material. I next also proceeded to type up my notes as an opportunity to reflect more deeply on my experiences. These written documents – and all other images and video captured while in the field – were continually backed-up onto an encrypted external hard-drive. As I collected a range of descriptive media such as books, pamphlets and other printed text over the course of following the practice, additional relevant extracts were scanned and arranged into an initial framework. In this all-encompassing digital format, it was then possible to group the artefacts into preliminary categories per both time/location and initial themes, the latter which could then inform subsequent data gathering activities. In this respect, the collection and analysis of data were not treated as distinct phases but rather viewed as closely intertwined processes reciprocally interacting with one another (Gobo, 2008). By the end of the fieldwork, this digital collection comprised an archival and broad thematically categorised repository of observations, reflections and illustrations formed through my experiences observing and participating in the field. Similarly, all formal interviews were transcribed verbatim after audio capture using the NVivo Qualitative Data Analysis Software (QDAS) package. Upon completion, these transcripts were exported into text files and again, copied and stored as backups on a password-protected encrypted drive. I distributed preliminary transcripts to all

respondents for feedback, and tracked minor alternations across the different versions, with the most up-to-date copy used in the final analysis.

### *Principles of Analysis*

After processing all the raw field material into a comprehensive digital data corpus, I was then able to begin to delineate a specific data set, and proceed with further formal analysis. At this point, it is necessary to clarify the principles which guided the analytic process. As mentioned, ethnographic reports – alongside forms of ethnographic questioning – serve a single purpose: to uncover the system of cultural meanings that people use (Spradley, 1979). Taking influence from the gap in literature outlined in the previous chapter, the main ambition for the research from the outset was to build an empirically justified qualitative-interactionist understanding of how transhumanism and technological human enhancement advocacy are constructed and enacted across the various subcultural forms which comprise such phenomena. This concern informed the development of my core research question

- *How can Technological Human Enhancement Advocacy (THEA) be characterised across a range of the locations where the practice is found?*

In the interest of addressing this question, my analytic approach was designed to explore a specific group of emergent thematic categories which I constructed in detail, rather than present a broad description of the entire dataset. In this respect, by taking impetus from existing literature on transhumanism and NSMT, and indeed compounded by early field experiences, initial themes and patterns within the data were identified using a deductive approach (Hayes, 1997; Boyatzis, 1998). My theoretical/analytic interest in four general areas of THE advocacy — Constituents, Mobilisation, Politics, Existence — led the coding process, with my codes generated to explicitly address an exploratory (i.e. content/data-driven) sub-question corresponding to each. Specifically, I was interested in learning:

*A) Who are the constituents of THEA? What kind of boundaries are evoked by this constituency, how are they maintained?*

*B) What kind of specific Goals might THEA be working toward?*

*C) What kind of Political beliefs and belief-systems are associated with THEA?*

*D) What kind of Existential beliefs and belief-systems are associated with THEA?*

After formally delineating the four major analytic categories (Constituents, Mobilisations, Politics, Existence), I made another important early decision surrounding the level at which to identify themes. These can be identified on either a semantic or explicit level, or at the latent and interpretive level (Boyatzis, 1998). During initial coding, I assigned codes to specific datum based on surface meanings clearly apparent within the data, in line with a semantic approach. Importantly then, after organising the data in this fashion to show a broad summary of patterns appearing in semantic content — based on an explicit reading of the material — over the remainder of the analytic process, it then became necessary to progress from the description to interpretation of data. During the later stages of analysis and writing up I drew upon data items and extracts to offer a detailed account of the underlying ideas, assumptions and conceptualisations that may have shaped or informed the semantic content of the data. In this sense, my approach integrated both theory-driven and data-driven codes, amounting to a kind of hybrid approach towards theme development (Fereday and Muir-Cochrane, 2006). At this point, I attempted to theorise more deeply around the significance of the patterns I'd identified, including their broader meanings and implications by crafting and presenting an analytic narrative (Patton, 1990).

As mentioned, this research took influence from the so-called second-generation of STS ethnographies, beginning from a post-constructivist theoretical paradigm in which the notion of intervention has proved pivotal (Hess, 2001). Correspondingly, for Hine (2007) the second wave STS ethnographer is a figure who inhabits a highly charged middle range: engaged in an active relationship with the field while at the

same time aware of their inability to draw a plausibly encompassing bigger picture (662). Normatively speaking, although as mentioned the study commenced from a position of cultural relativism, it is necessary, as Hess (2001) recognises, for second wave STS researchers to distinguish cultural interpretation within the research process from the complete analysis. In Hess' judgement, for ethnographic studies to contribute at all meaningfully towards debates of public importance, second-generation STS researchers must treat cultural relativism as a methodological heuristic distinct from epistemological or moral relativism. Simply put, the necessity of beginning an analysis with a principle of cultural relativism – no doubt, with some parallels with the impartiality and symmetry principles of the strong program – can, for Hess, be linked to the equal and opposite necessity of conducting the final research analysis with a framework that is partial and asymmetrical, and likewise grounded in an epistemological and moral anti-relativism (7). According to this line of thought, I sought to perform a 'stepping out' in the process of analysis, issuing clear normative judgements and prescriptive recommendations that might address practical problems relating to the culture and politics of THEA. In this regard, I hoped the study might meet the need for what Hammersley (1992) calls practitioner ethnography (135), or for the research to have practical, policy-oriented outcomes.

Multi-sited ethnography has been suggested to embody the tensions of Merton's (1968) proposal for middle-range theory, with the multi-sited researcher bound up in analogous efforts to balance theoretical aspirations with their practical experience of the field. The multi-sited imaginary's unique status as a dynamic knowledge form then apparently makes multi-sited work a fitting methodological strategy to explore the issues of adequacy and engagement central to middle range theory. These sizable pressures compel multi-sited ethnographers to adapt their sense of research purpose as the project comes into being. On this point, I aspired for my approach to ethnographic-type study in the context of this research to earn the qualifier critical, through its deliberate attempts to differ from other descriptive and interpretive approaches in some important ways. As mentioned above, the practice of ethnography invariably adopts a complex theoretical orientation toward culture, the likes of which is often treated as fundamentally heterogeneous, conflictual, negotiated, and evolving, as distinct from unified, cohesive, fixed, and static (TESOL, 2017). In contrast with the strong-relativistic view of all cultures as



somehow 'different but equal', so-called critical ethnography explicitly assumes that cultures are positioned unequally in power relations. Attempts to form a description of culture inevitably come to be shaped by the interests of the researcher, the audience, and dominant communities within it. As such, for those interested in advancing a so-called critical iteration of the multi-sited ethnographic approach, it is appropriate to adopt a method of analysis which is both engaged yet flexible enough to allow for critical meaning-making in the face of these concerns.

### *Method of Analysis*

In line with the multi-sited ethnographic tension between theory and practice and the project's critical-interpretivist theoretical position, Thematic Analysis (TA) was decided to be the most amendable analytic approach to suit the research. TA is a data analysis technique most commonly associated with discursive (in-depth) interviewing (Gobo, 2008), but also is used in the analysis of field notes and other textual data forms. The method – designed to find and account for recurring patterns of symbolic meaning contained in descriptive data – is then predicated on the base assumptions of qualitative research, particularly the interpretivist notion that individuals are not isolated in their interpretive actions. Rather, these actions can amount to consistent thematic units (i.e. vectors) which might reflect overarching value-systems shared across groups of people. From this perspective, themes not only recur again and again throughout different parts of a culture, but they also connect systems of a culture (Spradley, 1979).

TA represents a highly flexible method of analysis independent of theory and epistemology, which can be applied across a range of theoretical and epistemological approaches (Braun and Clarke, 2006). That said, the method also has limited interpretive power if analysis excludes a defined theoretical framework. In methodological terms, my application of TA then represents what can be described as a contextualist use of the technique, sitting between the two poles of essentialism and constructivism – or, what might perhaps otherwise be called *moderate constructivism* (Edwards et al, 1995: 26). While radical constructivists treat the domains of nature and human society as coterminous, moderate constructivism

stresses that natural reality is never fully absorbed into the world of culture, but rather only interacts with the latter at localizable interfaces such as practices and artefacts (van den Belt, 2003). In the case of this research, written analytic memos, interview and survey data as well as other eclectic THEA related textual/media artefacts produced during the observation of THEA practices provided the descriptive raw material which I worked to extract common themes from. As Braun and Clarke (2006) rightly point out, the suggestion of themes emerging or being discovered is a passive account of the process of analysis, which denies the active role the researcher plays in identifying the patterns/themes, selecting which are of interest, and reporting them to the readers (Taylor & Ussher, 2001). Again, the manufactured character of TA is entirely in-fitting with Marcus' proposal for multi-sited ethnographic studies to develop insights that are adequate for their intended purpose, while also actively engaged in the social world. It is now necessary to present an account of how the TA process was applied to the project.

My use of theoretical analysis followed the procedural guidelines offered by Braun and Clarke (2006). The first phase of my TA process comprised of getting familiar with the data by reading through my entire data set. All the while when doing so I was mindful of my ambition to achieve a detailed analysis of data specifically relating to my predetermined analytic categories using an exploratory, data-driven semantic approach. During this initial phase, which included the verbatim transcription of all interview data, I started taking notes and marking ideas for coding schemes that I would revisit in subsequent phases. During the transcription process the interview data chunks were categorised under the five headings of *Constituents*, *Mobilisations*, *Politics*, *Existence* and *Misc*, a convention also applied to all other survey material, textual data and other collected field artefacts. The second phase comprised of generating initial codes, building upon my list of general ideas about the data and what I was finding interesting for one reason or another. I worked systematically through the entire data-set giving equal attention to each data item, identifying all noteworthy aspects of data that I believed could potentially form the basis of repeated patterns across the set. Codes were applied in NVivo, by tagging and naming selections of text within each data item. The use of this software then allowed all extracts to be coded digitally, and then automatically collated together within each code.

The third phase, searching for themes, began after all data had been coded and collated, and I had compiled a long list of all codes identified across the data set. I then worked to sort the codes into potential themes. This stage was marked by me starting to analyse my codes and consider how they might combine to form an overarching theme. At this point, I used mind-maps to represent the themes which I was constructing, and to assist in my visualisation of the relationship between codes, themes and different levels of theme (e.g. main over-arching themes and sub-themes within them). By the end of this phase I had produced a collection of candidate and sub-themes, complete with a record of all data extracts coded in relation to them. The fourth phase next involved reviewing and refining themes. At this point, I worked to ensure themes had both internal homogeneity and external heterogeneity (Patton, 1990), or that all the candidate themes cohered together meaningfully, and demonstrated clear and identifiable distinctions between one another. In this respect, it was necessary to dissolve and reform some weaker candidate themes until I'd achieved a coherent pattern across all collated extracts, leaving me with a set of discrete and robust candidate themes captured in a thematic map. I then proceeded to reflect on the validity of individual themes in relation to the entire data-set, ultimately to try and ensure candidate themes were representative of meanings evident in the data set overall.

Once I had produced a candidate thematic map that I was happy with, I moved onto the fifth phase of Braun and Clarkes (2006) approach, which involved defining and naming themes. At this point I proceeded to “define and refine” (22) the themes that I wished to present for my final analysis, organising each data-extract into an internally consistent account with an accompanying analytic narrative. This phase included the development of, and elaboration upon sub-themes, and continuation of detailed analysis regarding the interrelationships between themes more generally. By the end of this portion of the analysis, I could describe the scope and content of each theme succinctly and had assigned accurate names for themes. Lastly, the sixth and final analytic phase was then ultimately the process of writing up the results of the study. After settling on the key themes which had been found within my fieldwork data, I was faced with the challenge of determining how to present my research findings. Much like the process of active interviewing, writing up findings from

interview data is itself an analytically active enterprise (Holstein, 1997). In this regard, I was mindful of how the act of writing – choosing what to include versus exclude in the account of findings – was itself a process of further conceptual refinement and analysis.

As the Open School of Ethnography and Anthropology (OSEA, N.D) acknowledges, typically the type of ethnographic genre adopted inevitably determines the relevant genre-form of ethnographic representation. Broadly speaking, ethnographic writing often takes the form of either a narrative, a report or an analysis. According to the OSEA's classificatory schema, given the projects master-trope of interpretation and the specific goal of the ethnography – i.e. to understand the cultural realities of those involved with THEA, and intervene in the world through the production of knowledge – this study can be placed within the analysis mode. In any case, when writing up ethnography the researcher must work to present a detailed, narrative account from the perspective of a participant who has experienced some phenomenon in its 'natural' setting(s). To this end, when crafting an analytic narrative, the researcher draws upon excerpts from data items such as interviews or stories of participants to enhance the overall richness of the research findings. Within the canon of analytic ethnography, narrative elements of writing composition are structured predominantly with the view to achieving interpretation more so than explanation. Similarly, as Braun and Clarke (2006) suggest, the task of the write-up for interpretive thematic analysis is to tell the complicated story of the data in a way which convinces the reader of the merit and validity of the analysis. According to this approach, the use of extracts taken from data can be used to demonstrate the prevalence of a theme.

Most importantly, however, the purpose of thematic write-up is to present more than just an overview of collected data, but rather to build a focused and robust argument in relation to the projects core research question(s). In this respect, during my write-up I purposefully combined analytic narrative and illustrative data extracts to make compelling and sustained interpretive judgements toward my data – both within and across themes – always with the projects guiding research questions in mind. On this point, given the project's over-arching ambition to piece-together and ultimately elaborate upon the kind of identity and identities which circulate around – and

indeed converge at – the point of Technological Human Enhancement Advocacy, I saw fit to include some geographic and professional biographical details when first introducing participants by name in my write up. This, I hope, will allow the reader to access to the necessary context to appreciate the range of backgrounds of those who are attracted to transhumanism and THEA, with the act of attempting to situate the actors by space and vocation helping to add an enhanced flow and lucidity to my ethnographic narrative. Yet it is however also important to recognise that far from being value-neutral signifiers, the biographic descriptions offered are also by their nature, highly selective research constructions and inevitably engender a certain analytic bias. By way of partial resolve, when possible, I have asked my interview/survey participants directly how they would prefer to be described. When referring to those who I did not speak with personally, I endeavoured to present titles in a fashion which directly aligns with the persons' wider professional profile as it appears within other records (i.e. Wikipedia) circulating within the public domain. In sum, this approach to writing-up delivered an analytically active account of the research, which captures my dual position as both a cultural member and cultural commentator (24) over the course of the project.

## CONCLUSIONS

This chapter provided an overview of the theoretical framework and methodological approach which formed the research, alongside relevant practical and ethical considerations which arose over its course. Per the review of literature presented in the previous chapter, qualitative-interpretive methods were deemed necessary to achieve a sophisticated account of the culture, symbolism and activity surrounding transhumanism and technological human enhancement advocacy, the likes of which can be accessed through participant observation. In this sense, the chapter recalled how the so-called second generation of STS ethnography has been marked by a tendency to shift the focus of participatory observational work away from the social construction of knowledge and instead toward the cultural and political significance of science and technology. As such, the chapter has argued the appropriateness of multi-sited ethnographic study as a sufficiently dynamic data-gathering approach

necessary to actively engage with the apparently vast and varied sites where the people, metaphor and practice of THEA is found.

The study's overall design has been mindful toward the status of research projects as inherently selective, researcher-led constructions, and the notion that the ethnographic field represents neither a spatial or holistic entity of any kind, but rather stands as a negotiated settlement for the specific purposes of a research project. To this end, the method of TA was determined to be a suitably flexible approach towards analysis of fieldwork data, sympathetic to the concerns of adequacy and engagement central to the multi-sited strategy. The chosen hybrid use of deductive and inductive TA (Fereday and Muir-Cochrane, 2006) integrated both data-driven and theory-drive codes over the course of the analytic process, amounting to an analytic narrative organised across major thematic categories: *Constituents*, *Mobilisations*, *Politics* and *Existence*. The next four chapters present discreet strands of separate-but-connected analytic narrative informed by these parent themes, starting with *Constituents*, which addresses key demographic, classificatory and associational features which I found related to THEA.

## 4

### CONSTITUENTS

*“The overman... Who has organized the chaos of his passions, given style to his character, and become creative. Aware of life’s terrors, he affirms life without resentment.”*

*-Friedrich Nietzsche Thus Spoke Zarathustra (1885)*

The over-arching argument put forward in the analytic material to follow is that far from being new THEA is a contemporary enactment of familiar ideals which have long provided bedrock for the *modern* world. For this reason, I have seen fit to open each remaining chapter with a poignant quote by Friedrich Nietzsche; an eminent cultural critic who foresaw the confluence of ideational tensions which, some century or so after his last writings, would eventually coalesce into a philosophical movement bearing the name *transhumanism*. This chapter explores in detail the variety of constituents who were found advocating for technological human enhancement across the range of research sites visited. The chapter addresses the following core research questions: *Who are the constituents of THEA? What kind of boundaries are evoked by this constituency?* Forming an adequate response to these questions requires reviewing the observation notes surrounding the overt social identity presented by those associated with the places, practices and metaphor of THEA, and recalling how during interviews the notion of personal identity was discussed. The chapter offers a general sense of how the social spaces were populated over the course of the research by characterising the range of constituents found engaged with THEA in detail. On this basis, it begins formally defining the normative implications of these findings in relation to the broader nature and status of human technological enhancement in the twenty-first century. By attempting to profile enhancement advocates to compare the variety of social identities clustered around the THEA it is possible to speculate as to over-arching features which might compare or contrast across advocacy communities. Likewise, by examining how boundaries between different forms of advocacy practice and advocacy groupings are both constructed and actively maintained it has been possible to comment on

politics of exclusion embedded within human-enhancement programmes, and how – if at all – these matters are addressed in situ.

The chapter divides into three sub-sections, which reflect various dimensions surrounding personal identity and participation in technological human enhancement advocacy. Firstly, under the heading *Demographics* it begins by defining the range of research participants included in the study. The impetus for this section was an analytic synthesis of observation notes and self-described biographies. Next, under the theme *Memetic Travel* it moves to explore the descriptions of how constituents first became introduced to and involved with technological human enhancement advocacy. Then, in line with the theme *Standards*, the chapter discusses the normative value attributions recognised to be at work in constituting the performance of THEA, presenting research participants self-reflexive accounts of what makes for a 'better' or 'worse' transhumanist or technological human enhancement advocate. This section explores how personal identities form in line with (and indeed, themselves come to inform) relationships with technological human enhancement advocacy. Finally, it proceeds to examine the notion of *Affinity*, considering respondents complex relationships with transhumanism, including the degree to which advocates express individual self-identification with transhumanism, and the level of social-inclusivity described by those who constitute the movement.

## 4.1 DEMOGRAPHICS:

### The Presentation of Self in Offline/Online Spaces

My field experience of THEA effectively consisted of a range of actors operating within the domain of technological human enhancement who displayed an array of personal characteristics – both overt and latent – over the course of our interactions. As such, it is appropriate to offer a detailed account of those individuals encountered over the course of the research, and, on this basis, attempt to outline some general traits surrounding the profile those involved with THEA. The data presented was captured partially through observations at various field-sites, and also in more reflexive detailed terms through self-described biographies offered by respondents over the course of interviews and surveys.



Firstly, it is appropriate to detail the range of social identities I observed while participating in THEA across the various settings encountered. I made the following observations across the entire range of field locations experienced during the study. In line with Mack et al. (2005), following my participatory attendance at field locations, I recorded relevant information surrounding appearance and 'People who stand out' from the point of view of a critical observer. Overall, my findings confirmed some aspects of the demographics of THEA alluded to by existing literature in this area – which can therefore perhaps be considered relatively unsurprising – but equally also revealed some novel traits displayed by constituents which were more unexpected.

### *The Range of Constituents: Observed*

Regarding the age of constituents, it was apparent Groups Advocating for Technological Human Enhancement (GATHE) appeared to be populated by those classifiable as baby-boomers – with a strong millennial cohort also appearing across the inner-city emerging technology and entrepreneurship focused community meetups. In this sense, the Futurist meet-ups appeared to attract young urban professionals residing within the major cities where these groups were based (London, New York, Oakland). Economic status was another key distinguishing feature I observed across the range of field-locations I visited. By and large, the constituents I encountered in offline spaces appeared to be of high socioeconomic status, and equally, I found their interest and involvement in technological human-enhancement to be somewhat driven by financial incentives more so than social, ethical or philosophical concerns. For instance, when I asked a long-standing attendee of the *Futurism NYC* events (Himself notably a Gen-x British expat working in Artificial Intelligence and Finance) to comment on the types of person the meetup group typically attracts, he replied: "...a lot of them are out to make money, to find investment opportunities... [...] ...the philosophy focused events are less well attended". This statement neatly captures an ambivalence apparent within Futurist circles I attended, namely how those interested in future-facing concerns appear motivated by some combination of personal, economic and social interests.

The tension between work and leisure was also mirrored in the London Futurist (LF) after-event socials, which appeared to serve at least partially as informal networking opportunities for attendees. Within these settings, in addition to being on the receiving end of various conceptual pitches for technology-focused start-up ideas, I was also presented with actual prototype early-stage technological innovations at times. For instance, mid-way through conversation, one London Futurist produced from his bag a working prototype of a slim-line portable LCD screen embedded within an A4 card portfolio – a design which he explained was intended to act as a high-tech professional promotion aid for distribution at corporate functions. (This notably instigated a heated discussion about the political economy of industrial-scale manufacturing, specifically the investment cost/benefit of LCD's manufactured in China versus elsewhere). From this, it's possible to infer THEA meetup groups attract a particular subset of the general population who, have sufficient leisure-time at their disposal to participate in such hobbyist type activities. Perhaps equally as importantly they appear motivated at least in part by the associated potential for knowledge and understanding emerging technology to deliver some level of personal gain. Further to this point, I also found that some futurists appeared to be early adopters of fringe or experimental new medical technologies designed to improve health and/or enhance healthy functioning. For instance, one futurist involved in the London Biohack scene who I met after a LF event, spoke of how, after recently suffering a stroke – an apparently genetic vulnerability which he told me ran in his family – he had rehabilitated himself using a transcranial Direct-Current Stimulation (tDCS) device imported from China. tDCS is a form of electronic neuro-stimulation delivery technology which is not currently subject to any regulation in the UK. To be sure, this reflects the culture of self-experimentation associated with transhumanism and biohacking.

The baby-boom demographic appeared to be most strikingly over-represented at RAAD Fest, where I would estimate millennials/Gen-xer's amounted to far less than 10% of attendees. Of course, logically speaking, this makes sense given the events' central focus upon longevity, and radical life-extension ends which can be seen to become proportionately more relevant and desirable later in life. Moreover, this observation echoes observations made by science writer Cynthia Fox, who suggested

in recent years boomers have developed a tendency toward *technogenerianism*, or economically privileged attempts at radically reforming the life-course itself echoing the reformation of social and cultural norms occurring during the 1960's (Fox, 2001). Further then, in terms of gender distribution across field-locations, Groups Advocating for Technological Human Enhancement (GATHE) appeared to be overall male-dominated. To be sure, I found this gender imbalance was in fact occasionally raised among Futurist event-organisers in self-reflexive terms, who were apparently frustrated by the general lack of female representation and engagement across their events. This point will be discussed in more detail in the *Boundaries* sub-section of this chapter. The clear majority of those who populated both offline and online social spaces associated with THEA also appeared white. Interestingly, this state of affairs did not appear to garner the same level of reflexive self-awareness among event organisers or participants as gender, despite it also being a recurrent feature across virtually all the sites I encountered.

Generally, regarding particularly noteworthy features surrounding the appearance of those who I found to be engaged in THEA, it can be said my observations met what might be considered standard/expected social appearances associated with the type of settings I attended. For example, it was apparent that across recreational or hobbyist settings with a complex technical/intellectual dimension – such as meet-up communities like *The London Futurists* and *Futurism NYC* – there was a consistent, observable tendency toward smart-casual dress. This initial observation was later confirmed and elaborated upon through direct conversations with those present within such spaces, who frequently revealed themselves to be professionals typically working within STEM and IT-related fields. Again, and perhaps unsurprisingly, the basic standard of smart-causal outfitting moved further towards business formal dress as the setting increased in its level of formal ties with industry and investment, typified in the annual *Strategies for Engineered Negligible Senescence* (SENS) *Rejuvenation Biotechnology* conference held in Novato, CA.



Figure 1: Formally Dressed Attendees at the SENS Rejuvenation Biotechnology (2016) Conference [Photo taken by Author August 2016].

That said, there were also a few exceptions to this otherwise generally conformist trend, particularly in the case of high-profile figures within the transhumanist movement, and the self-representation of THE advocates across various online spaces. For example, the appearance of Biomedical Gerontologist Aubrey De Grey is one such particularly striking case, as owing to his distinctive lengthy beard, Aubrey's appearance can be considered a decidedly non-conformist physical trait when positioned against the aesthetic standards of other practising biomedical professionals.



Figure 2: Biomedical Gerontologist Aubrey De Grey [Image Credit: Gabriel Weinstein]

Given the nature of Aubrey's work, which stands as an attempt to arrest and potentially reverse the biological ageing process, in psychological terms this beard might perhaps be interpreted to represent a noticeable, constant personal, physical reminder of the transient passage of the human life course. Seen in this light, it reflects observable, material effect of cellular senescence upon the body over-time.

Perhaps secondary to this, and indeed in more socially-oriented terms, it can also equally be reasonably argued that the beard could also be interpreted to represent a form of distinctive and eccentric personal branding. Its quirkiness could surely help draw public and media attention towards the professional efforts of Aubrey and the *SENS Research Foundation*. Similarly, in the case of online identities, some technological human enhancement advocates who I found in online spaces through the internet – a platform allowing radical, unconstrained digital forms of self-expression (Turkle, 1984; 1995) – presented a far more non-conventional and divergent range of physical appearances, both real and imagined. A selection of these eclectic avatars derived from Twitter profiles are as follows:

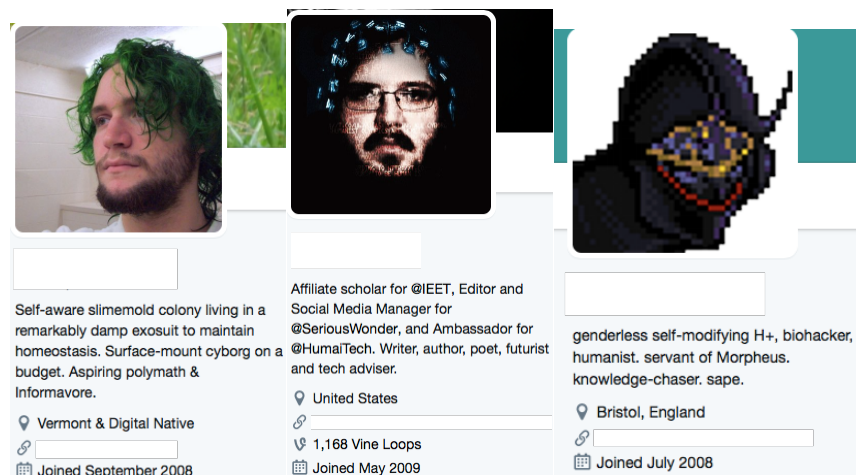


Figure 3: A range of THEA-related public twitter profiles [Screenshot taken by Author February 2017].

As apparent in Figure 3, the online identities I encountered displayed a far more extensive range of physical characteristics, with a spectrum ranging from ‘real-world’ profile pictures – notably in this instance, presenting an alternative appearance, with hair dyed electric green. Others put forward apparently science-fiction inspired photo-edited renderings of the self. Indeed, some went further still all the way to entirely fantastical digital-culture character avatars. This general trend toward exaggerated forms of self-expression can be considered testimony to the relatively unbounded, or freeing self-expressive power of new media. It is also a reflection of the complex association between THEA and the decidedly non-conformist or anti-establishment values typically held within both Biopunk and Biohacker subcultures, a topic discussed further in the *Politics* chapter to follow.

Overall, these anecdotal empirical findings somewhat conform to the best available literature on the social-demographic profile of Human Enhancement Advocacy constituents. Notably, it echoes claims made by Hughes (2015), who – based on survey data gathered through a series of surveys of the global membership of the WTA (Hughes, 2003; 2005; 2008) – suggests the transhumanist movement is dominated by 18-40-year-old men with engineering and natural science backgrounds. While my initial observations outlined here surrounding the general constituents of THEA are based on imprecise, overt social signalling and the use of crude forms of categorisation, they offer an initial indication of the demographic profile of those who appear attracted to the prospect of technological human enhancement. Moreover, they provide some empirical basis for further speculation surrounding the different types of person partaking in advocacy-like activities across the range of settings encountered.

### *The Range: Self-Described*

When it came to the self-described biographies raised during the interviews and surveys, overall the responses appeared to loosely reflect many of the same forms of patterning identified throughout the observations, with some notable exceptions. Firstly, regarding age: again, the respondents I sampled for interviews and surveys were at a ratio of roughly 40:40:10 between Baby-boomer, Millennials and Gen-X. Regarding economic status, my respondents were drawn randomly across my field locations, notably with the unintentional effect that all of whom involved also happened to be either in fulltime higher-education or otherwise employed in highly-skilled professional vocations. Also, concerning gender distribution, my sample reflected the general trends of disparity experienced across locations overall: of the 20 individuals interviewed, 18 were male, and two were female. Similarly, of the 10 electronic survey responses received, nine forms were completed by males, and one was completed by a female. Finally, concerning ethnicity, the entirety of my interview and survey respondents can also be classed as ethnically white. Again, this disproportionate weighting appears to have occurred by chance rather than design, and I believe should be taken as a relevant, indicator of the general constitution of groups associated with THEA featured in the study.

In terms of the bibliographic information provided by respondents during interviews and surveys, it was apparent that many self-identified as having some high-level specialist expertise within the field of technological human enhancement – although this qualification was not necessarily an intimate technical knowledge and understanding of the technologies themselves per se. Interestingly, of all the respondents who I engaged with through during interviews and surveys, relatively few were directly involved in the actual development and manufacture of technologies pertaining to human enhancement. Further still, of the minority who were directly involved in the development or manufacture of THE, some appeared to consciously occupy an ambivalent space in their techno-scientific knowledge-status somewhere between laity and expert. One clear case of such lay-expertise was that of Abelard Lindsay – notably his online pseudonym derived from internet forums – a software engineer by training from the Bay Area who described himself as a nootropics designer. Abelard introduced himself to me as follows:

*“...I go by Abelard Lindsay on internet forums, and I am most famous for inventing the Cilitep stack, [...], and that product was [...] developed on the Longevity forums based on my research for several years [...] that product has been really successful and [...] led to me being on [...] different podcasts and speaking at conventions [...] kind of becoming an amateur... or professional actually, commentator on nootropics and cognitive enhancement related issues.”*

**Interview with Abelard Lindsay. Java Beach Café. La Playa Street, San Francisco. 12th August 2016.**

These comments reflect the widely-discussed extent to which the internet has problematized the distinction between lay and expert knowledge (Hardey, 1999). As such, it becomes difficult to place the experience and qualification of respondents. For the sake of classification, specialists in this study were considered those for whom their sole income is derived from the development and direct application of technologies of human enhancement. In this sense, the other handful of persons who might be legitimately classed as direct technical-specialists – working on the development and application of emerging sciences and technologies explicitly for purposes of human enhancement – who I spoke to will now be listed. Firstly, in the field which might be loosely described as biological life-extension, I spoke with



Biomedical Gerontologist Aubrey De Grey – originally a computer science graduate from the University of Cambridge, chief science officer of *SENS Research Foundation* in Mountain View, CA. Furthermore, I also interviewed Hugh Hixon, a biochemist by training, and long-standing research fellow at *Alcor Life Extension Foundation* – a self-declared world-leading Cryopreservation organisation based in Scottsdale, AZ.

Other technical specialist type respondents included those working within the field of computer science, such as Artificial Intelligence (AI) expert Ben Goertzel – an Applied Mathematics graduate who entered the field of AI and Robotics and currently serves as chairman of *Novamente LLC*, an Artificial Intelligence software company. I also interviewed Andrés Gómez Emilsson, a graduate of the Symbolic Systems Program (SSP) at Stanford, working for a Silicon Valley start-up focused on the application of Artificial Intelligence for natural language processing. Equally active in the space of human-cognition and computing was Conor Russomanno, co-Founder and CEO of *OpenBCI* – a platform designed to support low-cost open-source hardware for purposes of Brain-Computer Interfacing (BCI). Finally, the last person who I found to be actively working at the interface between THE-advocacy and practical THE-development (yet not making a livelihood from human-enhancement) was Rich Lee – a Packing Sales/Office Manager and self-styled hobbyist biohacker from Utah. This account concludes the range of respondents included within the study who were actively involved with carrying through attempts at THE as a form of *praxis*.

The remainder of persons involved directly with the study in the form of interviews and surveys can then be described more accurately as sympathetic observers rather than direct technical practitioners in the field of emerging science and technology. This significant population of respondents includes those advocates who somehow otherwise contribute toward the development of the necessary legal, ethical or political frameworks to support the future development of prospective technologies of human enhancement – and the promotion public awareness and critical discourse surrounding newly emerging forms of science and technology. In this respect, another distinctive cohort of respondents who occupied the fringe of advocacy/non-advocacy who I reached through both interviews and surveys was that of academics,

journalists/film-makers, and indeed other providers of various forms of third-sector support.

Compared with *Specialists*, overall, this group of *Observers* displayed some noticeable ambivalences surrounding technological human enhancement. Firstly, the academic constituency was represented most directly in the Cambridge University group named *Apotheosis International* I spent time with – a normative philosophy collective concerned with how new emerging technologies such as artificial intelligence and biotechnology might be utilised to more fully address matters of normative importance. Two key respondents drawn from this group included Jonathan Krude – Analytic philosophy graduate from Trinity College Cambridge – and Medical Student from Claire College, Daniel Hurt. In the academic arena, I also consulted two members of the interdisciplinary group *Theologians Testing Transhumanism* (TTT) – Ted Peters, a Professor at the *Graduate Theological Union*, University of California, and, Brian Green, Lecturer in Engineering Ethics at the Santa Clara University *Graduate School of Engineering*, CA. My interviews and surveys also captured the perspective of several journalists involved with covering Transhumanism in a generally sympathetic capacity. On the west-coast this included Zoltan Istvan, writer for *The Huffington Post*, and US presidential candidate of the Transhumanist Party, and IEET contributor Hank Pellissier. Moreover, the study also included other UK-based writers for VICE's *Motherboard* – Gian Volpicelli and Alex Pearlman – and documentary film-makers Sean Blacknell and Wayne Walsh.

Beyond those respondents who I found engaged in forwarding various forms of academic and media discourse surrounding human technological enhancement, there were also those who were engaged in attempts to shape the direction of Law and Public or Ethical policy in other imaginative ways. In this respect, it is possible to distinguish another sub-demographic of those who were working in an eclectic variety of fields which might best be described as third-sector activity – or voluntary work in social-ethical-political areas of THE. For example, one of my first interviewees was Paul Spiegel, a Harvard Law School trained, San Francisco-based Lawyer currently working on drafting the necessary legal constitution for an eternal humanity. Others who I found working in a voluntary capacity included Walter

Crompton, a volunteer campaign manager for Zoltan Istvan within the USA Transhumanist Party, and Chris Monteiro, a Windows Systems Administrator and transhumanist activist from the UK. Equally, others who were undergoing efforts to influence public policy surrounding emerging technology, such as Steven Umbrello – a student of law and innovation and technology at the University of Edinburgh, and then-managing director at the *Institute of Ethics and Emerging Technology*. Finally, also within the sphere of ethics, I garnered a range of input from leaders of faith-based technological human-enhancement advocacy groups, such as Micah Redding, Executive Director of the *Christian Transhumanist Association* and Lincoln Cannon, Founder of the *Mormon Transhumanist Association*.

This section has presented a broad overview of the range of constituents who I observed and interacted with directly across the variety of field locations I visited over the course of my study. My initial observations suggested that – in line with the best available literature on the subject – those who inhabit the spaces associated with THEA often exhibit high social and economic status, and tended to be mostly white and male. Moreover, among these, there were also some quite notable instances of eccentricity and non-conformist physical appearances, including elaborate and even outright fantastical elements of self-representation appearing most pronounced within online spaces. When engaging directly with those who I found to constitute THEA through interviews and surveys, responses were notably drawn practising technical specialists, versus other knowledge-workers and activists from loosely allied sectors – who were more critical in their position toward the prospect of THEA. It is now necessary to move to examine in more detail the origin stories of how such individuals came to be exposed to/involved in technological human enhancement.

## 4.2 MEMETIC TRAVEL & STANDARDS:

### Networked Propagation of an Idea(1).....

My respondents presented an array of personal narratives surrounding how they became first introduced to/or involved with Transhumanism and THEA, the details around which were captured in much detail through the interview and survey responses. This section, beginning with *Memetic Travel*, discusses the circumstances

surrounding people's entry into the field of THEA – again both from my observations and self-described accounts detailed within the interview and survey data. Next, continuing the subject of the key, normative value-attributions apparently routinely made by constituents of THEA, under the subheading *Standards* the section consider how, for those operating within transhumanism, standards of performance are gauged by those who identify with the cause. On this point, another area where I accrued a good volume of data was organised around the question of 'What makes a 'Better' or 'Worse' Transhumanist?': I then move to provide an overview of key discussion points surrounding the specific standards or performance against which my respondents judged the behaviour of themselves and others concerning the advancement of Technological Human Enhancement (THE).

### *Memetic Travel*

My observations drawn from the various field locations visited indicate that – perhaps unsurprisingly – entry and recruitment of individuals into the world of THEA appeared to be almost exclusively online, or web-based. There is no doubt that further to the role that earlier technologies of information and communication played in coordinating the Extropian e-mail list, in the time which has elapsed since the internet has allowed for the building and maintenance of numerous communities of interest organised around human technological enhancement. For example, *Meet-up* is one such online, popular web-based platform for arranging community meet-ups, which supports the existence of a range of transhumanist, emerging technology and futurism-type groups worldwide.

## Transhumanism ▼

Meet other local Transhumanists to discuss topics such as nanotechnology, biotechnology, artificial intelligence, immortality, and the emerging global super-organism.

56,226  
members

164  
Meetups

[Join Transhumanism Meetups](#)

**Related topics:** [Futurology](#) · [Life-extension](#) · [Technological Singularity](#) · [Artificial Intelligence](#) · [Nanotechnology](#) · [singularity](#) · [Cryonics](#) · [New Technology](#) · [Nanotech](#) · [Robotics](#)



Figure 4: The Distribution of ‘Transhumanism’ Meetups worldwide. [Screenshot taken by Author February 2017].

Over the course of my movement within the field, the London Futurists email-distribution newsletter proved a particularly potent source of information surrounding other relevant external events and interactive social opportunities. Consistently, across field locations, the advocates who I spoke to typically reported having found-out about such events through various web-blogs, electronic newsletters or Facebook groups. Practically speaking then, electronic communication is the essential means of disseminating information around THE, and organising forms of THEA: In this respect, the increasingly global reach of the internet has undoubtedly led to an ever wide-spread proliferation of such concepts, and promoted new forms of social coordination and offline activity related to THE.

Despite the significant role of the internet in contemporary THEA, my respondents' self-articulated descriptions of how they were first introduced to transhumanism and the concept of THEA were far more complex. Many respondents referred to holding a kind of deep-seeded, innate awareness of the concept or idea of technological human enhancement which appeared to quite vastly predate their awareness of the existence of transhumanism a named movement or a formal philosophy. As one interviewee – a long-standing member of the rationalist community who currently

works for a major Silicon Valley breakthrough biotechnology investment company –  
– puts it:

*“The idea is basically [...] it's obvious! [laughs] [...] Yeah. Like so many of these things it feels just like a background part of consciousness. [laughs] but it feels that way because I've been embedded in it for so long, right?”*

**Interview with Respondent ‘EW’. Conducted online via Skype. 14<sup>th</sup> September 2016.**

The implication here is clearly that the philosophy of Transhumanism can be in some sense understood as an intrinsic feature of their ordinary, common sense view of the world. Similarly, Andrés Gómez Emilsson suggested the following in an interview:

*”[ ...] I probably figured out pretty much all the ideas in transhumanism on my own way before I knew it existed as something organised as a community [...]”*

**Interview with Andrés Gómez Emilsson. Colma, CA. 14<sup>th</sup> August 2016.**

Here Andrés appears to be concurring with the notion that there is something intuitive or elementary about the transhumanist way of thinking. Based on these extracts we might speculate the drive towards THE forms a fundamental aspect of human consciousness, and that the central motifs of transhumanism are so deeply ingrained within the societies and culture in which such movements occur that for some they appear virtually indistinguishable from common sense. Throughout my interviews, I encountered much evidence to enforce the latter notion. For instance, one major initial gate-way into transhumanist ideas that my respondents frequently mentioned was Science Fiction in different media forms, ranging from work of the classic writers such as Isaac Asimov to the more recent work of Charles Stross, through to contemporary Hollywood cinema such as *Limitless* (2011). Equally various magazines of different sorts were mentioned, ranging from *Mondo 2000*, R.U Sirius' Californian cyber-culture magazine circulated in print during the pre-internet era of the 1980's and 1990's, through to *H+ Magazine* which was published online from 2008-2009 by transhumanist advocacy organisation *HumanityPlus*. Through the discussions I had with respondents, it is clear both traditional and new

media sci-fi forms have captured the imaginations of many advocates, helping to bridge a gap between fantasy and the possibility for THE.

Again, in keeping with my observations, many respondents also spoke at length surrounding the role the internet played in initially exposing them to futurist ideas. As well as mention of long-standing hubs of online advocacy such the Extropian e-mail list, and the World Transhumanist Association, my respondents also referred to other more contemporary online spaces which had been personally inspirational by way of introducing them to transhumanist-type ideas and discussion. For instance, there was mention of early involvement within virtual communities surrounding information exchange on subjects related to technological human enhancement – such as *Longevity* forums (headed *Advocacy and Research for Unlimited Lifespans*) an online forum for those interested in the pursuit of life extension. Typically, presence within online spaces related to THEA necessarily preceded offline encounters of this kind, with *Meet-up* representing the most overt example of this trajectory. On this point, during an interview, Scott Jackisch, lead-organiser of the Oakland-based *East Bay Futurists* meet-up group, described how the online platform had led to further offline forms of engagement first with futurism and later transhumanism. Scott, an IT Consultant, told me he'd moved to the Bay Area after a death in the family, and had initially sought out meet-ups as an opportunity for social interaction. Again, he explained how Artificial Intelligence-type *Meet-up* groups appealed to him as he believed they stood somewhere at the intriguing apex between science fiction and fact.

Another widely mentioned online site used for the incubation and dissemination of transhumanist ideas was *Facebook* groups – some of which include *Transhumanism: The Future of Humanity* (9468 Members), *Techno-Optimism* (6148 Members), *End Aging Now* (4086 Members) and *Utopian Global Solutions* (3192 Members). It is obvious that the maturation of the internet from Web 1.0 to 2.0 has made possible a wider proliferation of online activity surrounding THEA. What remains less clear is the role the digital mediums constituent of networking technology itself plays in drawing potential-proponents of THE together. One attendee who I met at *Apotheosis International's Transhumanism: Resituating Humanity* conference mentioned to me that Facebook algorithms had suggested the event to her, indicating

that the increasingly data-driven informational structures of digital culture are coming to exert influence upon offline social formations in ways that are new and with as yet undetermined outcomes. In this respect, it is also relevant to reflect on the extent to which online support and activism interfaces with offline advocacy and indeed formation of coherent or actionable political strategy. There has, for instance, been much criticism directed towards the capacity for the internet to deliver effective, lasting social and political transformations (Morozov, 2011). This topic will be discussed in more detail in the *Politics* chapter to follow. Notwithstanding some recurring common threads such as Science Fiction and the Internet, everyone I spoke with had their own unique account of how they were first introduced to – and indeed become sympathetic toward – the notion of transhumanism. Some stories were extreme – such as Zoltan Istvan's who described how a close encounter with stepping on a landmine while working as a journalist with *National Geographic* left him with a deep-felt drive to preserve life. Others were more every-day, such as Ted Peters who by chance entered a conversation with Oxford Philosopher Nick Bostrom during a coffee break while attending an academic event to deliver a paper at Berkley on the ethics of nanotechnology. These deeply personal accounts reflect the fact that despite some common features, by and large, stories introductions/entry into THEA remain unique to the individuals' life circumstances.

This sub-section has presented an overview of some of the main ways in which information and ideas surrounding THEA were observed to travel, including self-reported accounts of how respondents first encountered the notion of THE, and/or came to be involved in the various online and offline spaces which can be seen to constitute the phenomena of THEA. In recent years, a set of more less well-defined future-facing narratives associated with 20th century Science fiction literature have been virally propagated through computer networks, with scientific and technological developments intensifying throughout the last quarter-century – both actual and imagined – acting to apparently blur the distinction between fantasy and reality in online spaces. Despite the general tendency for communities formed around technological human enhancement to come together and coalesce online, never the less, it is also evident that the specific process and possibilities of THE – and indeed the most appropriate format for THEA – remain negotiated mainly by individuals on their terms. The next section will now move to discuss how standards



of behaviour and performance are established and maintained across the various sites where THEA was found.

### *Standards*

My respondents offered some revealing statements when the interviews entered the area of discussion surrounding standards for Transhumanism/THEA. In short, they suggested the specific positive attributes, for my respondents a better transhumanist is someone who displays some combination of *Boldness*, *Optimism*, and *Openness to the New*: These qualities were all considered to be highly desirable traits for an advocate for THE. Firstly then, *Boldness* essentially refers to the ability to act with confidence to fully satisfy intellectual curiosity – and with it, persevering in attempts at pushing back the frontiers of scientific and technical knowledge – somewhat irrespective of the social, economic or political consequences which might arise from such course of action. Notably, during my discussions around this key attribute, the previously mentioned distinction between those who can be described as technical practitioners working within the STEM fields versus other, non-specialist supporters/advocates of THE became somewhat conflated. In this sense, *Boldness* tended to be mostly framed as a desirable trait for those actively working on the forefront of technological innovation to possess, although other non-practitioner advocates might equally be considered ideationally bold in their support of programmes of potentially disruptive scientific research/technological development.

A closely related character trait which was also discussed during interviews – and no doubt applicable to advocates for Technological Human Enhancement more generally – was that of *Optimism*, which refers to a strong belief in the power of science and technology to deliver humanity toward a somehow better future. My respondents suggested there was a very high-probability that transhumanists were also then techno-optimists of some variety. In this regard, it was suggested that transhumanists were typically supporters of the concept of technological progress or the notion that technology can – and indeed should – be continually improved upon to enhance the quality and quantity of human life perpetually. To be sure, this perspective risks becoming an overly deterministic view of technology, or the

assumption that technological innovation alone might provide an effective solution to societal problems: This subject will be addressed in more detail in the direction/politics chapter to follow. Finally, the quality which I have labelled *Openness to the New* can be understood to roughly correspond with trait 'Openness' under the 'Big Five' dimensions to personality model popularised within the field of psychology from the 1980's onwards (Goldberg, 1993). In this respect, my respondents suggested 'better' transhumanists ought to display the temperament of being highly open-minded towards new concepts and experiences – or an imaginative and curious disposition. In this sense, 'good' transhumanists should then be enthusiastically embracing of change and new ideas, and indeed willing to adapt to radical circumstances or conditions of life which might come to follow in the wake of future scientific and technological developments.

Further to the need for transhumanists to embody of these traits as individuals, some respondents, emphasised the need for broader, structural courage and openness, or the need for boldness and open-mindedness at the level of institutional and legal policy: On this point, Aubrey De Grey asserted:

*“...the thing here is to be courageous, to be able to stick ones neck out and adhere publicly to intellectual positions that are not mainstream, [...] I totally appreciate that every academic, they've got a career to forge [...] so [...] they might be doing damage to their prospects for promotion. Now of course that's the big problem [...] what really has to happen is greater entrenchment of policy of open-mindedness, of allowing grant applications to go forward even if they are substantially contrary to the mainstream.”*

**Interview with Aubrey De Grey. Town & Country Resort, Fashion Valley San Diego, CA. 6<sup>th</sup> August 2016.**

The above implies there is something inherently non-conformist or even counter-cultural about the transhumanist character. Aubrey suggests transhumanists are typically inclined to adopt theoretical positions which might be entirely at odds with the general scientific consensus, and indeed highlights the need for higher levels of academic or institutional support in the interest of advancing non-conventional lines

of research. Boldness is then not only the individual and professional confidence to align oneself with unconventional areas of interest and investigation but also as it manifests in the form of institutional support, particularly financing, necessary to carry such programmes through to completion. At whatever level it might be practised, boldness can essentially be thought of as the outcome of combining open-mindedness with optimism surrounding the possibility of science and technology. The above concludes a succinct overview of the three major positive personal traits or characteristics that good transhumanists ought to possess, as described by my respondents. Further then, it is now relevant to consider how these specific character attributes relate to broader transhumanist values more generally.

Regarding specific values for Transhumanists, my respondents frequently emphasised the importance for advocates of THE to have some degree of continuity with the values of Enlightenment Humanism, particularly rationality. At first glance, this suggestion appears to correspond with literature which characterises transhumanism as basically an intensification of European Enlightenment canons of thought (More, 2013). That said, there were also some interesting discussions surrounding the apparent difference between the ideal notion of what a transhumanist ought to be, versus the actual reality of those who tend to comprise the movement. The following extract from my interview with Scott Jackisch neatly captures this disparity. When asked if reason and rationality are integral to the philosophy of transhumanism, Scott replied:

*“I would like for that to be true [Laughs] [...] I think there are cases of us lacking in epistemology and where it could be better [...] So I agree, the best transhumanism is the rational transhumanism with good epistemology, that is what I would say.”*

**Interview with Scott Jackisch, Trestle Glen, Oakland, CA. 15<sup>th</sup> August 2015.**

In this sense, while the transhumanist movement apparently predicates itself on core European Enlightenment values – principally those of reason and rational empiricism – there apparently remains some marked difficulty upholding these as ideals as standards in the practice of THEA. Scott suggests some of those who associate with transhumanism employ a dubious level of epistemic rigour, and as

such transhumanists and their allied projects inevitably blurring the distinction between science fact and science fiction.

On this topic, another interesting response came from Cambridge Medical student Daniel Hurt. When asked whether he felt that intellectual faculties such as reason or rationality were – or indeed ought to be – integral to the transhumanists agenda, Daniel replied:

*“I would probably not agree with that. I think some of the things that transhumanists are pursuing evoke emotions very much at a sort of base level [...] I think people who are highly rational and introspective are more likely to question some of these things [...] People who are most likely to make a contribution towards the technologies are rational but those who might be interested and would identify as a transhumanist... not necessarily.”*

**Interview with Daniel Hurt. Conducted online via Skype. 9<sup>th</sup> August 2016.**

From this perspective, the implication is that at face-value Transhumanism appears to be driven less by rationality and more by the associated Enlightenment value of belief in science. In this respect, Daniel suggests some central transhumanist tropes – such as the quest for immortality – clearly pre-date the scientific revolution, and can, therefore, be thought of as at least partially inspired by more irrational or emotional impulses. According to this viewpoint, the pursuit of THE is apparently animated by more than simply the application of reason and the pursuit of empirical facts alone. No doubt this idea has many precedents in historic analyses, such as Fullers (2010) account of the practice of modern-day science standing as a secular residue of the theologically inspired Judeo-Christian notion of humanity created in *imago Dei*. To be sure, the claim also notably somewhat resembles the suggestion previously made by Davis (1998) surrounding the apparently mythical underpinnings of the current human obsession with technologies, particularly those of information and communication – a notion he calls *Techgnosis*. The relationship between Transhumanism, THEA and forms of esoteric and religious belief will be discussed in greater detail in the *Existence* chapter to follow.

This section has provided a brief overview of how essential standards of performance are apparently gauged by some of those involved with THEA – particularly the specific attributes and values that were mentioned regarding good transhumanism and advocacy for THE. In summary, advocates for THE – who identify as a transhumanist and otherwise – endorse and seek to promote boldness, optimism, and openness to new thoughts and experience at both the individual and structural level. These desirable traits are apparently themselves predicated on a set of far deeper values associated with the European Enlightenment, most obviously: Reason, Rational Empiricism and Belief in Science. However, the former two values can and often do become conflated with the latter. This blurring which, when combined with the high-emphasis on pioneering and visionary character traits also associated with transhumanism, has the effect of generating much popular interest/appeal – while risking an overall distortion of the empirical legitimacy of the principle sciences and technologies in question. Next, in line with the subject of *Affinity*, the second major theme extracted from the *Constituents* data-set, it is appropriate to address the complex relationships that THE advocates expressed regarding their level of self-identification with transhumanism. Moreover, and how this might be understood to either compare or contrast with advocacy for technological human enhancement more generally.

### 4.3 AFFINITY:

#### Boundaries, Inclusivity & Social Integration

Another substantial thematic area which generated much discussion throughout the interviews was that of *Affinity* – which refers to the level at which my respondents expressed some degree of self-identification with either transhumanism and technological human enhancement advocacy. It was highly relevant to discuss the construction and maintenance of boundaries or barriers which might be taken to prevent full self-identification with THEA or participation within the various online and offline spaces associated with the phenomena. The signifier *transhumanism* and its related term *transhumanist* are problematic and limiting descriptors for those who identify with THEA, as illustrated in the previous Methodology chapter. Accordingly, my respondents displayed mixed feelings toward formally aligning

themselves with the cause. In short, to get a sense of the range of responses, when asked 'Do you identify with transhumanism?', most respondents expressed 'Yes' (9 Respondents), some expressed 'No' (3 Respondents), while a significant portion remained Ambivalent (7 Respondents). This section will present some of the various responses related to this area of questioning in more detail.

### *Boundaries*

Of the respondents who answered 'Yes', several appeared to endorse and support transhumanism but qualified this strong self-identification by acknowledging the different subtleties which exist within and across the movement. According to even its most enthusiastic supporters, Transhumanism was characterised as forming quite a broad umbrella, with their views falling somewhere beneath that umbrella. This convention alludes to the apparent diversity present within transhumanist-type thinking, hence why the acronym THEA was chosen as a more fitting handle for the breadth of identities and activities which occupy this space. Many of those who indicated during interviews that they identified with transhumanism deemed it necessary to then proceed with offering their specific interpretation of what transhumanism is. This response allowed them to negotiate the terms of their affiliation and provides a good indication of the types of barriers which might prevent others from formally identifying with the movement. For those who declared that they were broadly in supportive of the idea, transhumanism tended to be framed in more vague terms as a relatively unobtrusive philosophical framework rather than a specific actionable programme. From a critical, symbolic interactionist perspective, we might compare this apparent minimising or obscuring of the particular aims of transhumanism to a type of image repair work – or, efforts made on the part of my respondents to manage my social impression of them.

Some respondents were prepared to formally identify themselves with transhumanism, while also recognising of the stigmatising or negative connotations which can apparently come from explicitly expressing such an affinity. As Chris Monterio puts it:

*“Not many people call themselves transhumanists, not a lot of people say ‘yes, [...] I’m a transhumanist’ this is a minority thing. [...] that’s an issue of branding. I would argue a lot of people would actually identify with transhumanism, and could be considered transhumanist and just never make that leap... for me, I do make that leap, but I’m very into it.”*

**Interview with Chris Monteiro. Fisherman’s Wharf. San Francisco, CA. 12<sup>th</sup> August 2016.**

Here, Chris suggests there is a somewhat niche social status to self-identification under transhumanism, which he puts at least partially down to a matter of branding – or the way transhumanism is perceived/received publicly. He implies that it tends to be only those who are extremely dedicated to the transhumanist-cause who go as far as to call themselves transhumanist. From this remark, we can begin to form some ideas surrounding the social standing of transhumanism, and the different levels at which affinity might be held.

Those respondents who were more ambivalent in their relationship with transhumanism expressed a range of reservations, tending to cite critical areas of contestation or disagreement within the movement: This middle-way allowed respondents the opportunity to tentatively show support for the cause while also distancing themselves from what they took to be less plausible/agreeable aspects of the transhumanist scene. For instance, nootropics designer Abelard expressed his disagreement with the premise articulated by Ray Kurzweil that a computer can, in theory, be developed to accurately replicate a person to such an extent that it *becomes* that person. This, he explained, was because he understood that biological systems operate on the basis of protein folding. These chemical reactions he believed would not be possible to simulate inside a computer – in this sense, he maintained that in the future there could – and potentially would – be adequate mimicry but never absolute equivalency. As this exchange demonstrates, many respondents apparently held a high-level of conceptual awareness surrounding the notion of THE, and as such were quite ready and able to offer quite technically sophisticated grounds for their personal orientation towards Transhumanism.

The small minority of respondents who answered more decisively with a 'No' to this question invariably went on to further justify their position through raising specific objections toward that which they understood to be central tenets of transhumanism. For example, Lutheran Pastor Ted Peters took issue with the apparent onto-epistemic mind-body dualism which he believed to underlie the transhumanist agenda and expressed strong reservations surrounding the extent to which transhumanists were apparently working to promote intelligence, which he understood to be the chief cardinal value advanced by the movement. Similarly, others such as engineering ethicist Brian Green indicated that while he was interested in transhumanism, he could not call himself a transhumanist as he was deeply sceptical of the philosophical and theological premises apparently underlying the movement. From the range of answers to this initial question, we can recognise how respondents presented many diverging perspectives on whether they would place themselves 'within' transhumanism. This dodge is once again indicative of the somewhat fringe status of self-identifying as a transhumanist. As such, it relevant to explicitly address the subject of boundaries, particularly how insider versus outsider status was framed and subject to negotiation across the various sites associated with THEA.

In a few settings, it was apparent that some particularly enthusiastic advocates for technological human enhancement wished to acknowledge – and even embrace – a clear separation between themselves and other more ordinary forms of society and culture. For instance, a recurring motif I observed while on the West Coast, and confirmed through interviews, was the sense of isolation that particularly committed THE advocates felt from the mainstream – what might otherwise be described as *deathist* (Istvan, 2016b) – culture. For some, this feeling of separation started in early childhood. Andrés Gómez Emilsson, former president of the *Stanford Transhumanist Association*, for instance, reflected on how his early life-experiences were marked by disparaging, social judgement toward his apparently intuitive ambitions for technological human enhancement. During our interview, he recalled:

*“...at 6 years of age [...] out of pro-social behaviour I kind of suppressed [...] those ideas, and it really wasn't until I came to Stanford that they came to life again, I saw [...] there is at least some degree of social acceptability to these ideas.”*

**Interview with Andrés Gómez Emilsson. Colma, CA. 14<sup>th</sup> August 2016.**



This passage is indicative of a form of boundary distinction drawn between THEA and the practices acceptability within mainstream society and culture. The passage also builds on the previous suggestion of there being a somehow innate quality to the transhumanist drive which for some presents itself during early childhood, and how this sensibility and the social standards or expectations of mainstream society appear at odds with one another. In this sense, the transhumanist community can be taken to provide a sort of validation, with THEA events providing an accepting or encouraging space for those whose interests and enthusiasm for THEA fall outside conventional social norms.

To be sure, this notion of social stigma and rejection by the mainstream was also mirrored throughout at RAAD Fest, where the apparent tension between those pursuing THE and society at large appeared to be raised in altogether more combative terms. Particularly striking from the outset of the conference was the organisers' apparent repeated attempts to instil the idea of the attendees as a select — perhaps enlightened — community of fellow travellers surely on the path to physical immortality. The second day of the conference notably presented a skit featuring a man driving to a bank and attempting to talk with the clerk about his desire for radical life extension. The clerk responded with cleanly scripted, superficial customer-service speak, appearing completely disinterested in the character's impassioned, yearning and ambition to overcome the biological limitations of bodily death, much to his eventual frustration. This skit, among the other numerous references to 'us' versus 'them' made throughout the event's proceedings acted to instil feelings of belonging at the conference and a sense of solidarity among the attendees. For example, the basic premise of a special status to true-believers (Hoffer, 2002) in THE was accentuated from the start of RAAD in the opening address titled *The Convocation of our Mission*, where David Kekich of the *Maximum Life Foundation* made the presumably tongue-in-cheek suggestion: "If you have negative people in your life consider cutting them out, or at least spending less time with them". For Kekich, total, absolute unwavering optimism is then a necessary pre-condition for true immortalists. On this point, the often-repeated mantra of *People Unlimited* — the chief organiser and founding sponsor of RAAD Fest — is "If you're in, you're all in". In this respect, it appeared there is absolutely no middle

ground for advocates: the options are either to accept the absolute value and importance to being alive – and with it, fully sign-up to staying that way for infinitude – or in a sense, you're already as good as dead. To put it crudely RAAD-ites were told to 'go hard or go home'. In keeping with this high-expectation for compliance, attendees were actively scorned by presenter Joe Balwin when attempting to leave the hall before the end of the at times gruellingly intensive 3+hour long panel sessions. All things considered then, owing to the high-level of commitment demanded by advocates and core focus on apparently unwavering, radical optimism, People Unlimited were on the extreme end of the THEA communities I encountered.

### *Inclusivity*

Throughout the in-depth interviews, to further explore the issue of boundaries, I directly posed probing questions around the degree to which there might be specific prerequisite characteristics or values necessary to join the transhumanist movement. First, I asked 'Can just anyone participate in with transhumanism?'. Interviewees who expressed some variation of 'Yes' to this question (n = 5) were almost evenly balanced against those who answered 'No' (n = 4). Despite the apparent tension across THEA between insiders versus outsiders outlined above, some respondents conveyed that, in their opinion, transhumanism was fundamentally open and inclusive. For example, Gennady and Wendy Stolyarov – author and illustrator respectively of transhumanist children's book *Death is Wrong* – replied:

*"I would say just anyone can identify with the philosophy, and share the fundamental aims of the philosophy."*[Gennady]

*"There are no by-laws. It's like asking can anybody be an artist."*[Wendy]

**Interview with Gennady and Wendy Stolyarov. Town & Country Resort, Fashion Valley San Diego, CA. 6<sup>th</sup> August 2016.**

From the Stolyarov's point of view, transhumanism quite clearly has an openly accommodating and fundamentally inclusive element to it. This line of thinking can

again be considered parallel to the suggestion that transhumanist-impulses have something of a universally accessible, even innate, quality about them. The core assumption here is that transhumanism and the transhumanist identity stems from merely having some level of voluntary identification with the transhumanist philosophy and that as such, access to the movement is not at all mandated or governed by any form of central authority.

Other respondents shared this perspective that anyone and everyone can – and indeed should – get involved with transhumanism. Probably the most interesting case for the wide-spread social inclusivity of the movement was made through the response to this question given by Zoltan Istvan, who said he believed the future of transhumanism would most likely be comparable to that of environmentalism. In this sense, Zoltan suggests that environmentalism, which started as a controversial and fringe social movement, has grown significantly in mainstream popularity over the last 15 or 20 years. This same kind of trajectory would also be inevitable for transhumanism, he believed, that is assuming technology and science continue to evolve. On this point, Zoltan suggests:

*“I think anyone and everyone's going to join it, it's just more a matter of getting from point A to point B and growing it.”*

**Interview with Zoltan Istvan. Town & Country Resort, Fashion Valley San Diego, CA. 6<sup>th</sup> August 2016.**

This response is interesting as it characterises transhumanism as a social movement, and quite clearly alludes to a form of technological determinism believed to be underlying the transhumanist trajectory – such an interpretation of the drivers/course of transhumanism will be subject to further detailed analysis in the *Mobilisations* chapter to follow. Zoltan's belief in an inevitable, society-wide proliferation of transhumanist sentiment animated by scientific and technological changes was not the only radically optimistic account of the social inclusivity of transhumanism. This same basic line of inquiry was echoed in the electronic surveys, where I included a variant of the same question: ‘Is Transhumanism an open movement for everyone?’. Walter Crompton, engineer and transhumanist activist, notably offered the following in his survey response:

*“It is not just open, but essentially inevitable for everyone. For example, if a brain-enhancing chip is developed, it's recipients would first be the elite, but it would spread downward quickly - unless specifically prevented from doing so by early recipients...”*

### **Survey response from Walter Crompton**

We can recognise this line of thinking appears to parallel the vague *laissez-faire* notion of trickle-down economics: According to Walter, widespread social dissemination can – and often does – follow technological developments when access is left to the invisible hand of the market. A variant of this argument was also made explicitly by Futurist Ray Kurzweil who – appearing at RAAD Fest via digital video link – suggested that wealthy early-adopters have access to new technologies while they are expensive, and typically work poorly. In other words, before market forces have helped to animate the technical refinement and economies of scale necessary to get the developments in question into the hands of late-adopters.



Figure 5: Ray Kurzweil appearing via ‘Beam’ link at RAAD Fest. [Photo taken by Author August 2016]

These responses toward the question of inclusivity from constituents of THEA provide an early indication of some of the views held by respondents toward the

politics of access to potential performance enhancements – and indeed the broader political economy which surrounds newly emerging forms of science and technology. Considering the evidence presented here, it appears at least some types of advocacy for THE encountered were also then tied to a particular set of distinctly free-market/libertarian beliefs and assumptions surrounding the future economic and social distribution of emerging technologies.

During interviews to get a slightly different angle on the same area of inquiry I immediately followed-up with the inverse: ‘Are there any attributes or values which are simply not compatible with transhumanism?’. My respondents frequently re-emphasised how it was imperative for transhumanists to be open to new ideas and experience, and as such, it was often suggested that people of a fixed mind-set were likely to carry opinions which could be considered ‘anti-transhumanist’. Many suggested those who are of the mind-set that the human condition is something which should not be changed are incompatible with transhumanism – a mentality which they also recognised might be typically held in tandem with forms of dogmatic religious fundamentalism. Most responses then generally agreed that people who are overly attached to traditional ideas, and with it rigid in their thinking, are likely to find themselves at odds with the principles of transhumanism.

Others offered more specific suggestions as to the attributes or values which they took to be incompatible with transhumanism: Ted Peters believed transhumanism has, to date, identified itself with a kind of Social Darwinism, where the chief criterion for human survival is assumed to be intelligence. In this respect, he inferred that to be of modest unintelligence appears incompatible with transhumanism, and went as far as to raise the suggestion that he took this to potentially be a slippery slope toward the wilful disregard – or even eradication – of those who lack high-levels of intelligence. Speaking in more conceptual terms, Scott Jackisch suggested that those of a post-structuralist or other non-systematic ontological viewpoint had presented some of the most scathing criticisms of transhumanism that he'd personally encountered. Related to this point, I also asked my respondents during interviews for their thoughts on the apparent disparity between male and female advocates for THE, and how women appeared under-represented within the transhumanist movement. One recurring suggestion which came up in response to

this was that it could have something to do with male versus female brains – a suggestion parallel to the controversial Empathizing-systematizing theory: This refers to a psychological model stipulates that men are more biologically disposed to the forms of abstract, systemic forms thinking associated with STEM, whereas women overall display a greater tendency toward more empathic and emotional forms of thought and reasoning (Baron-Cohen, 2002).

In summary, the areas of questioning around *Affinity* raised some responses regarding the types of boundaries which advocates for THE can be seen to construct and actively maintain. It appears most transhumanists – and indeed those somehow otherwise advocating THE – tend to be of the position that transhumanism is an open and inclusive movement, with some describing how they felt intuitively drawn toward the basic sentiments underlying the cause from a very early age. That said, there is also something of a schism between the taken-for-granted notion of universal accessibility to THEA, and the complex realities of material/economic factors affecting processes of scientific and technological development and dissemination – as well as those attitudes and values alluded to which appear fundamentally incompatible with the transhumanist drive. In no uncertain terms, according to my respondents, those who have strong inflexibility in their perspective, heavy religious beliefs or a belief system which does not ascribe a high-level of value to systemic, ordered thinking are unlikely to find these traits compatible with transhumanism.

## CONCLUSIONS

The chapter has explored how transhumanist identities are talked into being, and how the quality of belonging or self-intensification under transhumanism can be seen to constitute a social performance of sorts. In this respect, it has used fieldwork data to outline the range of constituents who were found to be involved with technological human enhancement advocacy, exploring how advocates come to assimilate themselves within the THEA scene, and attempt to demarcate their key values and form a distinctive and coherent identity in relation to the prospect of THE. Clearly, while it is apparent not all advocates for technological human enhancement are comfortable being allied with the movement by name, never the

less, such actors appear to share psychological-motivational features, including a commonplace belief in the materially actualising or generative power of technics as a tool for bodily self-preservation, or means of somehow securing future economic prosperity. In sum, based on the findings outlined in this chapter, the constituents of THEA can be roughly categorised in a way that is both sympathetic to their different ideological and professional backgrounds, as well as the nature of their investment as a stakeholder in the prospect of technological human enhancement. I suggest, broadly speaking, in the context of this study those interested in THEA can be helpfully differentiated according to classification across the following four major technological human-enhancement advocate subcategories:

#### A) Specialists (Industrialists/Academics)

This category encompasses those advocates for technological human enhancement who themselves worked directly within techno-scientific knowledge-production fields, and sought to marshal their technical proficiency and expertise in the interest of garnering research funding capital, and stimulating public discourse and debate around emerging technologies of human enhancement.

#### B) Technical Hobbyists

Frequently a derivative of 'A', who typically possessed high-level technical skills in natural science/technology/engineering and pursue fringe/experimental forms of innovation not strictly for purposes of gainful employment but instead more as a recreational pass-time. This category sometimes encompass retired members of 'A', or technically-competent university graduates working in other specialist technical areas not strictly related to THE.

#### C) Consumers

A large group and economically dominant group who sought out and attempted to garner support to make emerging technologies available at the consumer level which might be used to alter standards of human welfare and performance somehow – often sought for more than conventionally remedial or medical usage, but instead for non-

essential lifestyle enhancement purposes. A category of advocate I associated with a high-level of material affluence and disposable income.

#### D) Fantasists

A type of advocate apparently highly-correlated with forms of science-fictional, utopian forms of thinking, technological-determinism and a strong commitment toward the revolutionary potential for human-focused applications of emerging technology. I found this category of advocates – particularly active across online spaces – typically tended to have limited formal scientific/technical training, but high-levels of optimism and enthusiasm for future developments expected to occur.

Although there are undoubtedly areas of overlap between the four groupings, at the extremes these categories meaningfully diverge according to their highly variable level of in-depth technical knowledge and expertise, as well as personal positioning as a beneficiary within the political economy of emerging science and technology. The relationship between these four primary advocate groupings I encountered can be represented using the following Venn diagram:

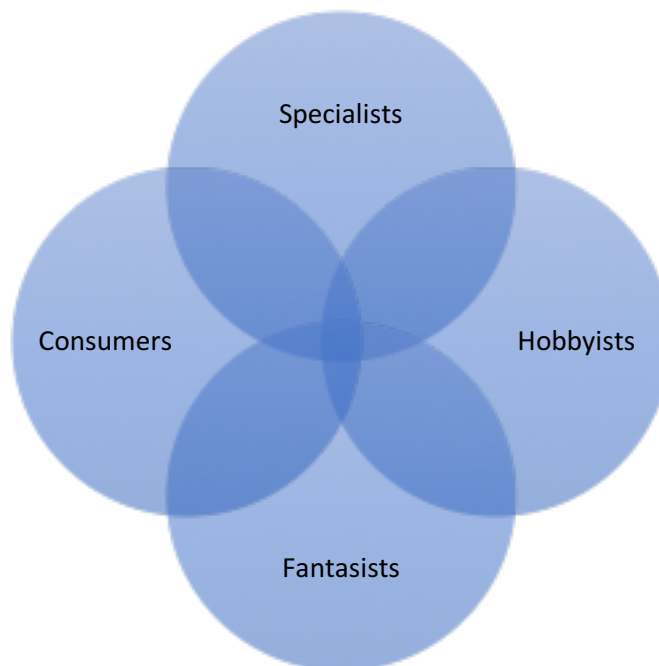


Figure 6: Four Major THE Advocate Sub-Categories [Designed by Author]



At a basic level, the entire range of constituents involved in THEA and research respondents tended to be drawn from across these four broad categories of advocate. My interview and survey respondents were drawn quite predominantly from the Specialist and Technical Hobbyist spheres, whereas my periods of observations and more casual-conversations and interactions at various field locations directly exposed me to the Consumer and Fantasist type forms of advocacy. Regarding boundaries, according to many of those I spoke to who described themselves as sympathetic to the cause, transhumanism specifically should be understood as a broadly inclusive community/movement, apparently baring an innate, almost artful, universally accessible quality. That said, it is also clear from the evidence presented, that Affinity and Boundaries are closely inter-related concepts. In this sense, one particularly noticeable feature of technological human enhancement advocacy is that many otherwise interested proponents who support transhumanist type activity appear to stop short of formally placing themselves within the movement. This slight-of-hand appears, to a significant extent, due to the dubious public image of transhumanism, owing at least in part to those all the more science-fictional, fantastical or elaborate claims which have grown out of the principally bold, intellectually creative/permissive space which THEA inhabits. The next chapter will build upon this profile of THEA constituents – who appear loosely bound together by a complex array of interests – by moving to examine the major theme of *Mobilisations* as it relates to the programmes of activity which constitute technological human enhancement advocacy.

# 5

## MOBILISATIONS

*“Man is something that shall be overcome. What have you done to overcome him?”*

*The time has come for man to set himself a goal.*

*The time has come to plant the seed to his highest hope.”*

**-Friedrich Nietzsche *Thus Spoke Zarathustra* (1885)**

Nietzsche’s answer to the problem of Nihilism was to be found in *overcoming*, or wilful self-direction towards a higher-purpose. By proxy, central to transhumanist philosophy is the motif of self-transcendence through strategic applications of science and technology. Building on the rough characterisation of Constituents outlined in the previous chapter, it is now necessary to review the range of ambitions held by actors found to be associated with human enhancement and examine how these intentions translate into specific schemes of activity. This chapter explores the intended directions for technological human enhancement advocacy as it was observed across the range of sites encountered over the course of the fieldwork, and as articulated in qualitative data collected directly from respondents. The chapter is designed to address the following research question: *WHAT kind of goals might THEA be working toward?* As we have established, Transhumanism – and indeed THEA more generally – can be defined as strategic efforts towards achieving some improvement to the human condition chiefly through the application of science and technology. In practice, this basic desire was enacted in a range of different formats, with the various groups and programmes organised around THEA typically electing to prioritise or place emphasis upon technically intervening into – and with it, somehow substantially augmenting – certain aspects of contemporary human existence over others.

The chapter divides into four sections, with each capturing a different aspect of the intended or ideal directions for Technological Human Enhancement (THE) as encountered over the course of the research. Firstly, it begins by considering the overarching *Telos* associated with THE which the study found to be formalised by advocates across major online spaces associated with THEA. This section

characterises and critically reflects on the range of technology-centred ambitions outlined in activist-led taxonomies of human enhancement produced using new digital media. The second section, titled *In potentia* then goes on to review my field-observations related to the three major domains of human existence advocates of THE were expecting to be radically transformed through emerging technology in the years to come: Intelligence, Longevity and Wellbeing. This section uses a combination of field-notes and visual images to review how programmes associated with THE and THEA were found being carried forward in practice.

Next, under the heading of *Via* the chapter moves to recall the waystations or benchmarks evoked as indicators of advocacy success or progress toward the goals of THE and THEA, and how to recognise when they are accomplished. This analysis of the self-reported benchmarks evoked by advocates to determine how progress can – or indeed should – be made in the various spaces associated with human-enhancement provides a rich source of insight into the complex value-attributions driving THEA across the range of settings where the practice was found. Finally, in *Techne* the chapter closes by examining the specific kind of strategic interventions my respondents considered necessary to bring about the desired ends endorsed by THE advocates. This section outlines the socially-embedded constraints and obstacles believed to stand in the way of realising transhumanist-type goals and considers how the practice of THEA might be used to address the contemporary social and cultural barriers which otherwise inhibit such ambitions.

## 5.1 *TELOS*: Modelling The 'Objectivisation' of Human Enhancement

As discussed, according to existing literature on the topic, transhumanism considers humanity to be an unfinished project and seeks to use science and technology as means to radically augment or extend human capabilities across various domains of human concern. This study found that, in practice, this ambition translates into several different programmes and agendas, which, despite sharing common motifs, appear to have emerged independently across a variety of settings. To get a coherent sense of the direction(s) of travel called-for by advocates for THE it is necessary to detail the range of goals associated with transhumanism/THEA. With this aim in

mind, it relevant to look at existing, activist accounts of the movement, and indeed how the range of ambitions observed during field experience and articulated by respondents conformed to, or contrasted with, these stated programmes of activity. This section examines the various types of goals alongside corresponding ideas and positions adopted by followers of transhumanism and THEA, and how these views translate into a range of specific programmes of activity for those sympathetic to the cause(s) associated with technological human enhancement. It begins by reviewing what can be described as internal efforts at charting the composition of the transhumanist movement. It refers to the interrelationship between these advocate accounts and other external analyses which have attempted to describe the contemporary role and format of the transhumanist movement(s), which has typically been through reference to modernist-type motifs conventionally associated with the Enlightenment era humanist tradition.

### *Networked Advocate Taxonomy of THE*

To date, there have been some internal efforts made at formally accounting for the various groups, programmes, and ambitions organised around the idea of technological human enhancement – as typically organised under/around the banner of transhumanism. Given how transhumanist communities apparently propagate rapidly online – and indeed, how the various technologies associated with transhumanism include those of underdetermined, or outright speculative status – is it a considerable practical challenge to track the range of transhumanist sub-groups and factions in existence. In recent years, the *HPlus Pedia* wiki has come to represent one such noteworthy transhumanist endeavour, standing as an online wikimedia project set-out to build on the Enlightenment convention of the formation of Encyclopaedias as an extensive, all-encompassing repository for human knowledge. As Chris Monteiro, founder of the project described it to me over drinks after a London Futurists meet-up: "Transhumanism is like a beast with multiple heads all fighting one another..." Accordingly, the *HPlus Pedia* wiki site was launched in the interest of promoting increased understanding and coordination between those who currently comprise the transhumanist movement, as well as a provide a source of information for the broader public. *HPlus Pedia* describes itself as a project intended to spread 'accurate, accessible, non-sensational information

about transhumanism, radical life extension and futurism among the general public' (HPlus Pedia, 2017). Chris stated that his intention for the project is to become an authority on transhumanism essentially, and with it help to create a coherent transhumanist movement. Further then, he suggested his work was essentially building upon what *Humanity Plus* tried to do previously with their *Transhumanist FAQ* (Bostrom, 2003) and *Transhumanist Declaration* (More, 1999) which he suggested had become woefully outdated. At the time of writing, *HPlus Pedia* has 1,776 pages, 716 of which are articles, with 217 files uploaded. 13,785 edits have been made from 10 active users. It is entirely reasonable to expect of course, given the currently limited number of contributors to the wiki, that the information presented on the site is likely subject to much personal bias – with even the largest and most established of *Wikipedia* projects struggling to uphold standards of objectivity.

That said, to assist in visualising the different strands of THEA related thinking which exist today, we can recognise *HPlus Pedia* offers the following detailed infographic – created by Chris Monteiro – which attempts to outline and compare the various types of technological human enhancement advocacy focused groups and perspectives which have emerged in recent years. Despite the issues surrounding subjectivity and personal bias, this actor-created model provides a detailed effort at labelling and formally classifying some of the different ideologies which cluster around THEA. Here, we can recognise Chris has outlined five major THE advocacy groupings represented roughly in order of size, namely *Futurism*, *Self-Modification*, *Longevism*, as well as *Transhumanism* and *Posthumanism*. The use of concentric circles in this diagram illustrates how the central named movements of *Transhumanism* and *Posthumanism* are suggested to fit within the remit of wider, more eclectic allied interests and practices which may or may not bear any direct or formal relationship with either named movement. Using this illustration, we can begin to further examine the relationship between transhumanism and other forms of THEA more generally. On this point, Chris' diagram implies the transhumanist movement is comprised largely of those activist groups who hold overlapping concerns which can be considered to also fall within the domain of other, peripheral, technology-driven interests. In other words, Chris believes transhumanism to be a distinct subset of a wider futurist scene made up of those who partake in activities

and share similar evolutionary-type visions for the future application of science and technology. The grounds for the different forms of THE and THEA categorisation conveyed by this model are deserving of discussion.

# Comparison of futurist ideas and positions

<https://hpluspedia.org/wiki/Comparison>

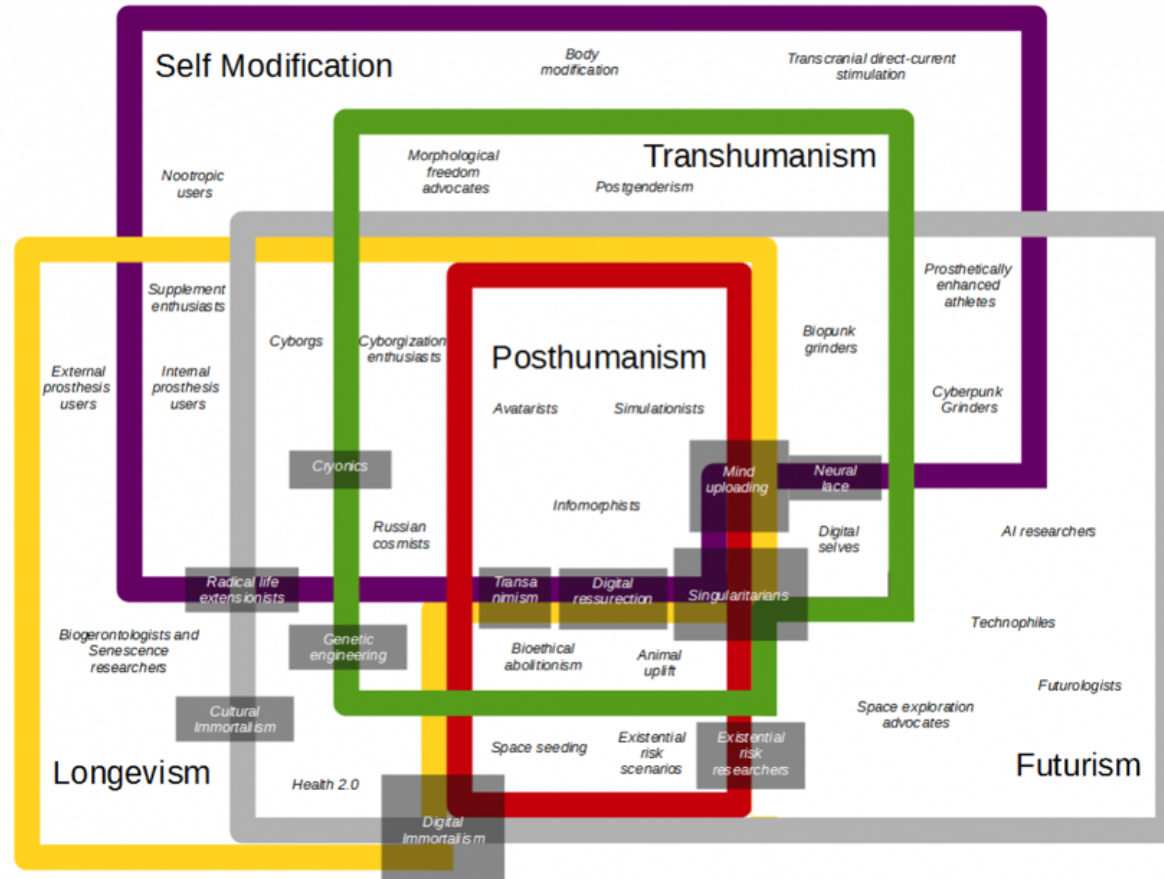


Figure 7: HPlus Pedia comparison of Futurist Ideas and Positions [Screenshot taken by Author February 2017]

According to this diagram, it appears Transhumanism encompasses forms of advocacy which place the technologically facilitated extension or enhancement of some aspect of the human – as manifested in existential, social and legal terms – as a core focus. For instance, among the stated ideas and positions which appear included firmly within transhumanism, we can notably count the ambition for *Morphological Freedom*. This descriptor refers to a legal/ethical extension of one's right to self-ownership, which includes the right to modify one's body according to one's wishes for extending or enhancing its potential. Likewise, a similar such desire to achieve absolute freedom to carry forward preferred, alternative forms of self-representation is also shared by the notion of *Digital Avatars*, which describes the practice of using virtual reality-based platforms to inhabit online world-spaces. In this respect, some transhumanists have historically used 'Second Life' – an online 3D Virtual world functioning like a Massively Multi-Player Online Role-Playing Game (MMORPG) but with entirely user-defined objectives – for group meetings and conferences. Equally, we can also recognise *Postgenderism* – a term used in reference to the social/political/cultural movement which seeks to affirm voluntary elimination of the gender binary – appears included within the transhumanist category. In this respect, Donna Haraway's *A Cyborg Manifesto* (1991) is recognised to be a particularly influential text in formalising a post-gender programme aided and abetted by emerging forms of science and technology (HPlus Pedia, 2018b). That said, it is apparent Haraway's own commentary on this prospect has hostile toward transhumanism, which she dubs "techno-masculinism of a self-caricaturing kind" (Gane & Haraway, 2006: 146). On this basis, some have suggested that far from being mutually supportive concepts, the transhuman/posthuman distinction might instead work to re-inscribe the male/female divide (Fuller & Lipinska, 2016).

It is apparent that – at least according to *HPlus Pedia*, which professes to be a leading contemporary authority on transhumanism – the continual advancement or maximisation of individual freedom is a standard feature of transhumanist projects. Moreover, a conscious, determined refinement of the self is another important value shared by many transhumanists and those who associate with THEA, as indicated by the *Self-Modification* sphere within the diagram. In this sense, transhumanism apparently dovetails closely with several other groups/causes advocating for a range



of typically invasive technological interventions into the human body and mind for non-medical, performance enhancement-oriented purposes. These allied groups notably include the Grinder biohacking community – an extreme outgrowth of body modification movement combining a hacker ethic with a drive for technological self-improvement – as advocates implant Cybernetic devices to generate data for further open-source developments. Much like DIYBio (Wohlsen, 2011), the underlying ‘do-it-yourself’ spirit of grinding no doubt represents a growing trend in non-institutional appropriations of science and technology.

This strong concern for both Individualism and Self-determination echo accounts of Transhumanism's foregrounding in Enlightenment Humanism, yet as many more recent commentators have recognised, the doctrine of individualism and use of the self as a descriptor is highly problematic. Ultimately, the various programmes listed on the diagram closely relate to technologically dependent things people may wish to do to shape, form and transform the self – what Hofman calls *practices of the self* (2016). As such, the major stated goals of transhumanism as reflected in Hplus Pedia's comparison of futurist ideas and positions apparently resemble high-technologically mediated forms of self-building. Beyond the obvious connection to the Enlightenment values mentioned above, it is not entirely clear on what grounds ‘transhumanism’ might be substantially distinguished from other THE advocate sub-categories within this model. When I asked Chris about this, specifically about how he distinguished Transhumanism from other forms of Technological Human Enhancement Advocacy, he explained his diagram tried to illustrate the inconsistency of transhumanism, or how the term means a variety of different things to many people. This pluralistic or Postmodernist account then appears at odds with more conservative readings of the movement. Not least, it diverges from the perspective of Natasha Vita-More – Chairwoman of the Board of Directors of *Humanity Plus* – who maintains that Transhumanism commences from a philosophical position of Modernism, owing to its fundamentally progressive metanarrative, and fixation on the human as the core locus of value.

The diagram also suggests *Animal Uplift* – a term popularised by science fiction writer David Brin, referring to the technological augmentation of non-human animals to endow such beings with the ability for increasingly intelligent (and thus

'human-like' behaviour) – falls under the remit of both transhumanism and posthumanism. This project with its core focus on the significance of intelligence and rationality appears to capture more transhumanist ambition than post-humanist, however, given the drive to extend humanity beyond homo sapiens, it also carries a certain type of post-humanist sensibility. This ambiguity reflects the convention found in the literature to use the 'transhumanist' descriptor to capture forms of technological posthumanism (Ranisch and Lorenz Sorgner, 2014: chp 1). It is also testimony to the complex inter-relationship between 'trans' versus 'post' humanist visions for future deployment of THE – a point addressed in the *Politics* chapter to follow. All things considered then, if nothing else the *HPlus Pedia* project is a relatively open attempt to record and accurately map the full range of ideologies which inhabit the THE space, in all their inconsistency. Somewhat contrary to the state of programmatic clarity suggested by Ranisch and Lorenz Sorgner, (Ibid) then, over the duration of my study it was apparent transhumanist activists were engaged in processes of creative meaning-making, and sophisticated attempts to map and situate their interests in relation to other, more peripheral, science, technology and humanity related concerns.

New digital media-based efforts at rationally and systematically capturing the inter-relationship between the different actors and activities within the technological human enhancement space were not limited to *HPlus Pedia*, as similar taxonomical impulses could be found across other online settings associated with human enhancement advocacy. For example, in a fashion similar to *HPlus Pedia's* wiki activist-led format, sympathetic observers engaged across other online spaces associated with THEA discourse made similar efforts to record and differentiate between the different orientations and approaches toward life-extension which currently exist. In an effort parallel to *HPlus Pedia's* comparison of futurist ideas and positions, I found a Reddit user in 'r/Longevity' during March 2017 had made a highly detailed attempt to chart the significant range of contemporary anti-ageing organisations, eventually captured visually in the following map:

Network of Anti-Aging Organizations. Answering the question "what the hell is going on in this field???"  
Updated 3/4/2017

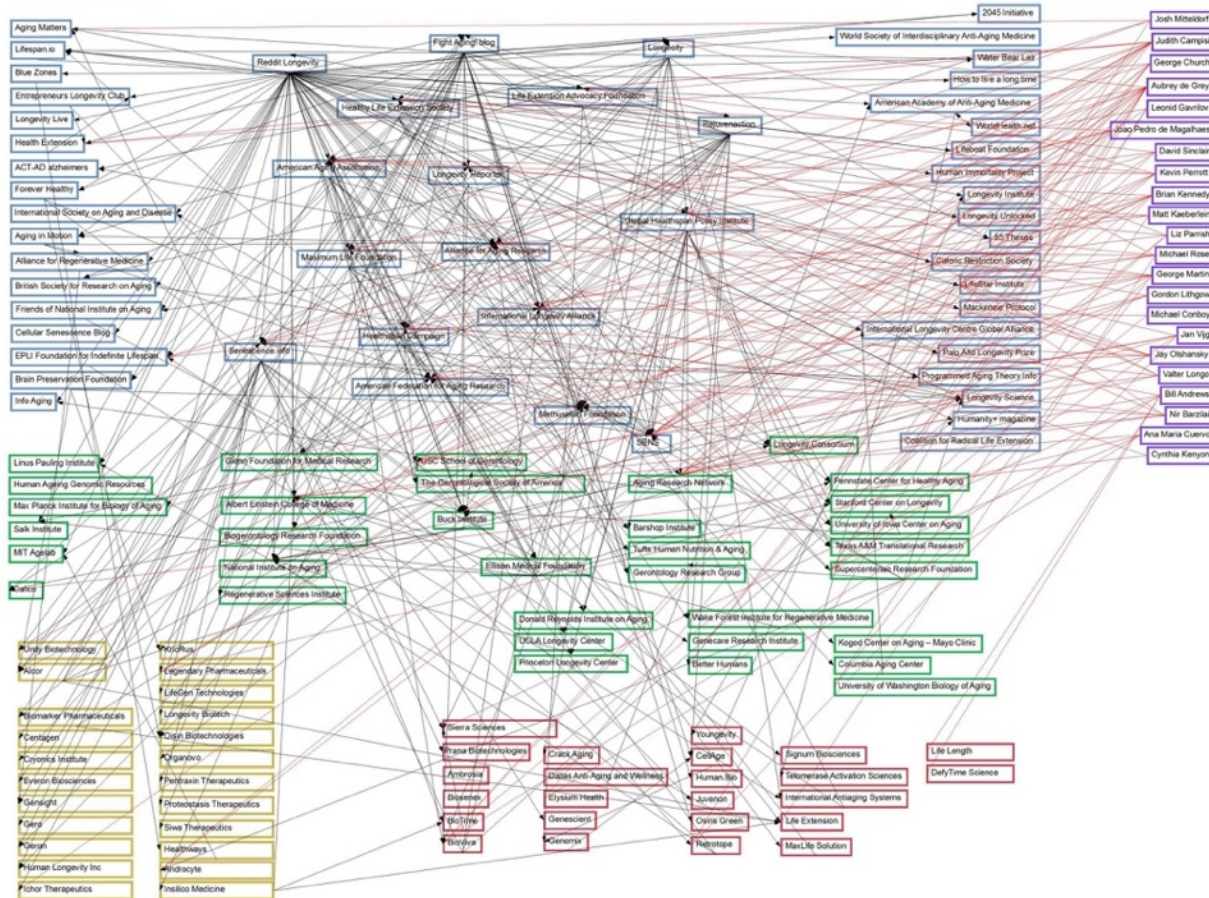


Figure 8: (Reddit) Map of Anti-Aging Organizations [Screenshot taken by Author February 2017]

This chart is indicative of the significant number of actors which currently occupy the anti-aging field, a highly consumer-driven space which we can reasonably expect will continue growing in the years to follow as the wealthy baby boom generation move further through the human life course. This topic is examined in more detail under the heading of *Super-Longevity* later in this chapter. In sum, this section has outlined how THE advocates have appropriated new forms of information and communication technology to capture, classify and model the various related projects and ambitions taken to comprise THE and THEA. These efforts are in line with the Enlightenment-rationalist impulse to produce systematic, all-encompassing repositories of knowledge. As such, it can be said the *telos* underlying THEA is above all, the advancement of human-understanding with a view toward self-transcendence and ultimately perfection, or what Braidotti (2013) calls *teleologically ordained rational progress*. In practice, this goal played itself out in multiple formats across the sites I attended. The chapter will now examine these in more detail.

## 5.2 *IN POTENTIA*: The Possibilities Inscribed within Technology

A popular way for the advocates I encountered to differentiate between the various types of goal typically associated with THEA, was by reference – either explicitly or otherwise – to Utilitarian Ethicist David Pearce's notions of *Superintelligence*, *Superlongevity*, and *Superwellbeing*. The so-called ‘three S's’ each refer to a different dimension of human existence expected to be radically augmented in the years to come. In line with Pearce's own abolitionist project (Pearce, 2007), which expects the combination of genetic-engineering and nanotechnology to abolish suffering across all forms of sentient life on the planet. Pearce believes technological developments set to occur will allow extreme improvements to each key domain of concern, the net effect of which will make possible a process of paradise engineering – or a kind of present-day, species-egalitarian version of the Baconian drive for focused applications of science and technology to restore Eden onto the earth. In this sense, *Bioethical Abolitionism* unites the ideas of transhumanism and utilitarianism,

advocating for the strategic application of science and technology for radical moralistic ends. Simply put, for Pearce, biotechnologically-derived drastic increases in human-cognition, life-span and psycho-spiritual integration are expected to deliver the opportunity to abolish pain and suffering across the living world.

Within this framework, improvements to external environment – such as socio-economic reform, economic growth, technological progress – are taken as necessary, but on their own insufficient to abolish suffering. Instead, fine-grained technological interventions – such as intracranial implants, pharmaceuticals and genetic-engineering – directly into humanity's biological substrate will be necessary to overcome the spectrum of negative Darwinian emotions which are taken to be the source of all planetary suffering. Given the strong normative-ethical imperative underlying the abolitionist project, this line of thinking appeared particularly popular among the Effective Altruism community – a philosophy and new social movement that applies evidence and reason to determine the most effective ways to benefit others (MacAskill, 2017). While Pearce uses these categories to evoke an ethical-utilitarian normative focus on the abolition of planetary suffering through pain-reduction, for this analysis, the 'Three S's' provide a useful set of descriptors to guide an empirically-informed account of THEA's main stated goals.

### *The Three S's*

#### ***Super-intelligence:***

Firstly then, Superintelligence refers to the project of enhancing human intelligence to superhuman levels. Simply put, for those interested in promoting superintelligence are engaged in efforts to perpetually advance the scope and complexity of human knowledge using technology – say, through the development of Artificial General Intelligence (AGI) and other forms of advanced machine learning. Across the various sites where advocacy sympathetic to this practice was found, a recurring inbuilt assumption was that the cognitive processing of raw information when understood and interpreted by rational human agent – or some artificial amplification thereof – brings forth an enhanced capacity for purposeful action in the world. Of course, this line of thinking echoes the Bacon-Hobbesian aphorism *scientia potentia*

*est* or 'knowledge is power' which emerged following the Scientific Revolution in Europe, a slogan which I found explicitly adorned a T-shirt worn by one of the London Futurist meet-up attendees.



Figure 9: London Futurist Wearing 'Knowledge is Power' T-Shirt at 'The Future of Cyber-Security' Meetup. [Photo taken by Author January 2016].

To be sure, deliberate efforts to raise continuity with this Enlightenment historical narrative appeared to be made by many of those who I encountered at various sites throughout the fieldwork. The interest in enhancing cognition among the broadly entrepreneurial-minded attendees of the London and NYC Futurist meet-ups appeared framed predominantly concerning the assumed economic value to raising human information-processing abilities to attain strategic advantage within the marketplace, more so than for socially edifying purposes such public administration and governance. That said, I also attended sites which were more attuned to examining the potential societal and ethical ramifications of radically increasing machine intelligence. One such location where this tension was reflected was *Virtual Future's Virtually Human* Salon at IBM's New York City Headquarters, where I

attended a closed-door discussion on the relationship between humans and non-human machine agents. This exclusive event held in downtown Manhattan during August 2015, drew together experts from both academia and industry to discuss the various implications of AI and other forms of computer-assisted decision-making across a range of topical spheres of human concern, such as finance and medicine.

The panel, moderated by New Media Theorist Douglas Rushkoff, was divided between two contributors apparently representing the arts, humanities and social sciences (Academic Philosophers, Dan O'Hara and Steve Fuller) seated to the moderators left, and two contributors drawn from industry situated to the moderator's right-hand side, consisting of Michael Karasick, Vice President of innovation at *IBM Watson*, and CEO of *United Therapeutics*, transgender businesswoman Martine Rothblatt. The proceeding discussion amounted to an in-depth examination of the topic of artificial intelligence, recalling a range of historical, theistic and artistic accounts of the human ambition to generate AI, combined with technical input from Karasick to ground the discussion points against actual R&D within the Watson division. Beyond the critical-historical perspective offered by the academic-philosophical side of the debate, and the more subdued-pragmatic input offered by IBM Watson's representative, the contributions of Martine Rothblatt – a self-declared believer in the 'School of Awe and Wonder' – were particularly striking. Rothblatt's input into the discussion centred around her latest book *Virtually Human* (2014), which considers the direct digital duplication of 'mindclones', and with it the global awakening of so-called cyber-consciousness in the near-future. Other core topics ranged from the assumed value-attributions at work in the creation of artificial cyber-consciousness, and the types of rights and obligations that might guide the development of such entities, onto more concrete, 'would-be' legal and ethical issues stemming from new applications of AI such as insurance and liability of self-driving cars. The event amounted to a detailed critical discussion surrounding the various ontological, socio-legal, and practical dimensions to the generation of AI which attendees believed could, at least in principle, one day match or even radically supersede human-level intelligence.



Figure 10: 'Virtually Human' Virtual Futures Salon at IBM HQ, New York City (August 2015) [Photo Credit: Twitter]



The live audience was hand-curated by Virtual Futures directors Luke Robert Mason and Dan O'Hara and ranged from those with high-level technical expertise, such as members of IBM's cloud computing department, and MIT-graduate engineers, to academics drawn from the social-sciences, sci-com journalists, and even new-media artists. Over the course of an informal social gathering afterwards, I met founder and CEO of *Open Brain-Computer-Interface* (BCI) Conor Russomanno, who's company – seeking to harness the power of the open source movement to accelerate the ethical innovation of human-computer interface technologies – launched in 2013 as the result of *Kickstarter* backing. I went on to spend several days with Conor, who I learnt had shaved his head completely bald to increase EEG conductivity, in his neighbourhood of Bushwick, Brooklyn, New York. I learned from Conor that *Open BCI* represents an effort to improve accessibility to high-quality brain imaging tools. Principally it makes affordable bio-sensing microcontrollers, and 3D printed EEG headsets – under the assumption that "...science advancements will only—and should only—be made through an open forum of shared knowledge and concerted effort, by people from a variety of backgrounds" (Open BCI, n.d). This effort at democratizing access to brain-computer interfacing technologies represent an attempt at accelerating understandings of the human brain and cognition through a combination of crowdsourcing, Citizen Science and data sharing.



Figure 11: Open BCI's Conor Russomanno 3D-Printing an EEG headset in Bushwick, Brooklyn, NYC. [Photo taken by Author August 2015].

The IBM Watson Virtual Futures event then worked to intentionally, and quite effectively, problematize linear models of technological progress, drawing attention to how the scaling up of human intelligence through AI will inevitably necessitate complex institutional reforms to existing social, legal and economic structures. Not least then, it appeared actors in this space felt it was reasonable to expect, and prepare for, future disparities of access to emerging technologies geared toward improving human intelligence and cognition. Cost-prohibitive barriers were seen as especially problematic, an issue which was being taken seriously in Conor's 'Open Source' approach towards BCI. My field experience in New York offered an introduction to the industry-led technical efforts of engineers and computer-scientists working within the private-sector, and how these technical ambitions collided with the more broad-based, social-ethical-legal concerns of other interested parties. Conceptualisations of the project and possibilities of *Super-intelligence* laid out here ranged from the use of sophisticated proprietary AI software to aid forms of human-decision making, onto the more far-out, science-fiction inspired idea of biologically-

based human intelligence merging with artificial intelligence. Indeed, the notion of significantly amplifying human cognition through consumer-technology would be revisited, in a range of different guises at other sites over the course of the study.

### ***Super-longevity:***

Undoubtedly the most common goal for THE encountered and discussed over the duration of my field experience was that of Longevity, which captures the drive to indefinitely extend the human life course. Essentially then, those advocates who I found pursuing longevity aspired to fully eradicate the notion of involuntary death from the ill-health of old age. Advocates who organised themselves around this goal of prolongation of life hoped that a technological extension of the human life course would not only allow for a more protracted duration of human experience but also, with it perhaps the accumulation of greater wisdom. Ultimately by consequence then, a much fuller realisation of the latent potential for human flourishing. As such, one particularly powerful motivational motif among the life-extension community was that of Longevity Escape Velocity which refers to the hypothetical point at which the human-life span might be extended by advanced technology at a rate which directly supersedes the corresponding passage of time. In principle then, this would mean those who are alive at this point would be able to benefit from improvements to technologies and treatment strategies to live in perpetuity.

Predictably though, I observed some substantial points of contention around the specific terms of life-extension as a desirable end for those who were in support of longevity as a goal for THE. I experienced a revealing disagreement during a casual conversation at RAAD Fest between Gennady and Wendy Stolyarov – author and illustrator respectively of the transhumanists children's book *Death is Wrong* (2013) – and a member of *People Unlimited* who passed by their promotional stall during the exhibition at RAAD Fest 2016:

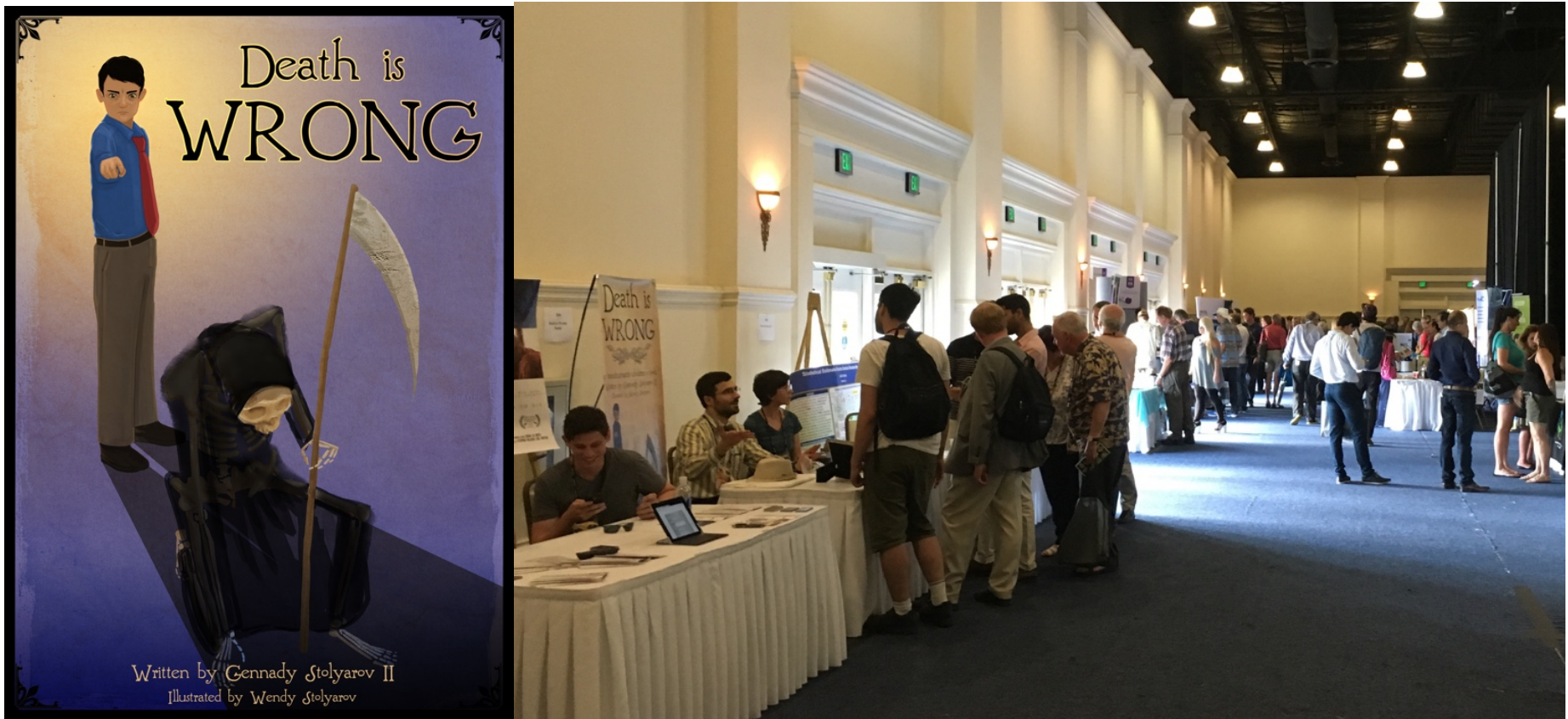


Figure 12: 'Death is Wrong' Book & Stand at The Exhibition During RAAD Fest 2016. [Photo taken by Author August 2016].

On this occasion, the Stolyarov's were also promoting the *Movement for Indefinite Life Extension* (MILE) through the sale of badges bearing the movement's name and logo, use of the term 'indefinite' in this context was raised as a point of contention by the *People Unlimited* supporter. She then voiced disapproval by repeating the mantra "If you're in, you're all in" – for her, anything less than a life spanning for eternity was an unacceptably modest level of ambition. By way of recourse, the Stolyarov's explained they believed the term *infinite* was overly prescriptive, whereas the descriptor *indefinite* was more sympathetic to the notion of individual free-choice to determine the length of their life-span.

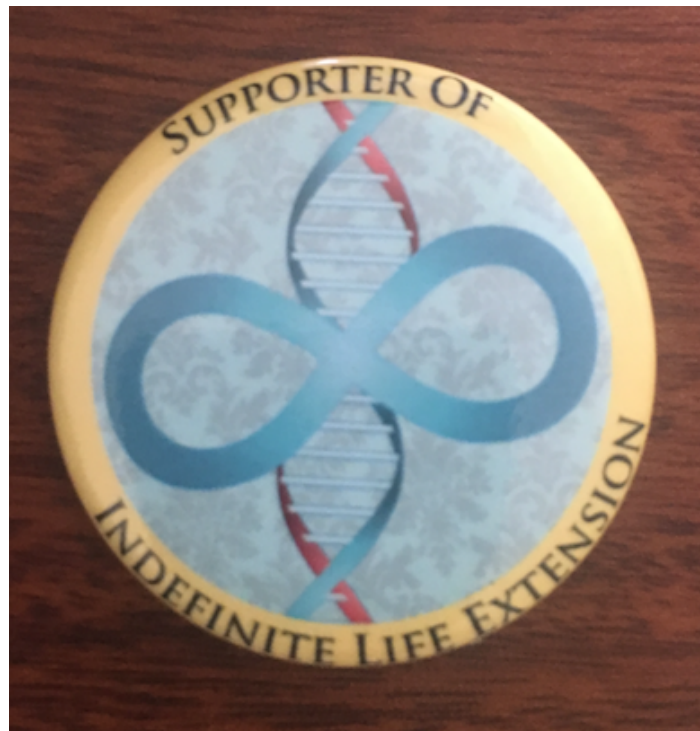


Figure 13: MILE *'Indefinite Life Extension'* Badge. [Photo taken by Author August 2016].

In this exchange, we can recognise how the ideal of *Super-longevity* championed by an THE advocate from *People Unlimited* – itself an organisation predicated to a large part on radical optimism – revealed a level of political naivety and programmatic short-sightedness. No doubt when taken to extremes, the more radical

forms of longevity activism can be seen to carry an almost authoritarian undercurrent which is antithetical to the more freedom-centred stands of THEA encountered. This tension appears borne out of the complex interplay between the rational and motivational aspects of longevity support and advocacy, a topic recurring throughout the remainder of this chapter.

According to the utopian vision of those technological-cultures born out of the West Coast – what Barbrook and Cameron call *The Californian Ideology* (1996) – the gradual degradation of the body over time (typically referred to by activists as *senescence*) is cast as another frontier to be effectively revolutionised through technology, by reformative efforts combining the freewheeling spirit of the hippies with the entrepreneurial zeal of the yuppies: An inbuilt normative assumption apparently traveling with this West Coast perspective – first formalised by Barbrook and Cameron, and reflected to an extent by my own field experience – is the conviction that only unfettered free-markets can move the dial on longevity research: consumer-demand led market forces are believed to co-ordinate and mobilize resources faster and more efficiently than any centralised authority. Suffice to say; faster is always better in the effort to ‘cure’ death. The highly symbiotic marriage between affluent first-world consumer cultures and the need for the marketised financial backing of early-stage programmes of research and development into life-extension was most clearly exemplified at RAAD Fest. The event resembled a proselytising fundraiser, attempting to simultaneously appeal to both the economic-returns minded sensibilities of the accredited investors in attendance, while also neatly fitting the self-conception of *self-transcenders* (Maslow, 1973): a distinct consumer group with disposable income alongside aspirational minded, counter-cultural values. In summary, given the strong market-orientation of content presented, the so-called ‘*Revolution Against Aging and Death*’ (RAAD) closely resembled a seed-fund investment drive, coupled with sophisticated lifestyle branding exercise, thinly-veiled as a hip and edgy consumer science conference.

### ***Super-wellbeing:***

Finally, regarding Pearce's ‘three S's’ framework: Super-wellbeing or Super-happiness refers to the transhumanist desire to phase-out involuntary suffering. In

Pearce's own words, this project can be conceived of negatively on the one hand, by working to effectively cure states of human malaise experienced through depression and anxiety disorders, but also in the form of more radical, proactive intervention through genetic-engineering (GE). Specifically, Pearce suggests GE should be applied with the aim to bring about life animated by *Information-sensitive gradients of bliss*. The aim for some transhumanists such as Pearce is a kind of high-functioning wellbeing or well-being which is both super-intelligent and prosocial: In other words, to find new, technologically induced ways to achieve a radically enriched sense of wellbeing, 'without compromising intellectual performance or social responsibility' (Pearce, 2014). The ambition to achieve super wellbeing can be thought of as roughly translating into a kind of present-day psychosocial rendition of the value which the European Enlightenment placed upon optimism, particularly the strong conviction that strategic application of science and technology can be harnessed to somehow bring about a continually better world.

As discussed, one highly popular – and apparently well supported – way of characterising transhumanism within existing literature is quite straightforwardly as an intensification of enlightenment humanism. As such, steadfast, positive direction of the movement might then be ensured through organised, rational inquiry and scientific-scepticism: However, as detailed throughout this chapter, the lived-reality appears far more complicated, as attempts at enacting these ideas were inevitably distorted by other forms of social, economic and political interest. One notable instance of a considerable tension between of ideal of rational/sceptical inquiry and the value simultaneously placed upon optimism is the extent to which it was apparent RAAD Fest's numerous commercial pitches appeared completely one-sided and criticism-free. Lead coalition for radical life-extension director Jim Strole casually said: "The critical mind is a disease" in his closing remarks before pausing for lunch on day 3 of RAAD 2016, in a manner apparently befitting of the devotional culture formed around *People Unlimited* (Van Velzer, 2014). This one-sided orientation is also appropriate to the highly motivational/movement-building aspects of event's proceedings. The deliberately provocative, bold declarations issued by animated speakers – such as *The Singularity University's* Jose Cordeiro who suggested: "We are the last generation to die, and the first generation to live forever" – helped to generate energy, enthusiasm and excitement from the captive audience.

Related to this point, it also appeared unusual for a 21st-century science and technology-focused event such as RAAD-Fest to completely neglect to promote itself across social networks, by encouraging attendees to use #RAADFEST, the associated twitter hashtag. The lack of effort to engage with wider-publics using social media didn't go unnoticed by some of the more critically-minded attendees, as illustrated by the following *Twitter* exchange:



Figure 14: Twitter Exchange Surrounding Use of Twitter at RAAD 2016.  
[Screenshot captured by Author August 2016].

This apparently deliberate underplaying on the part of the conference organisers raises questions as to the openness or transparency of the event, a particular cause for concern given both the necessity for peer-review as a mechanism for determining both the ethics and legitimacy of scientific research and practice. Viewed from an



all-the-more sinister perspective, – especially taken in the context of the exclusionary remarks made by David Kekich of the *Maximum Life Foundation* in his *Convocation of Our Mission* opening address – this move could also be seen to echo the tendency for cult groups to isolate their member base. All things considered then, in the case of RAAD Fest the major trope of Super well-being – or more specifically, its allied practice, radical optimism – was mainly evoked to insulate advocates and advocacy leaders from sources of external criticism.

The previous two subsections have provided an overview of the primary goals of THE: both as they appear represented in taxonomical efforts in the online advocate spaces observed, and as articulated by respondents encountered across the range of field-sites attended. Having summarised the ends endorsed by THE advocates and advocacy groupings encountered – which conformed to the ‘three S’s’ framework, albeit with some unintended inflexions – it is appropriate to consider the specific routes to success envisioned by the actors who I found advocating for THE.

### 5.3 *VIA*:

#### Travelling Through, *En Route*

This chapter opened by examining an activist-led taxonomy of the primary goals associated with technological human enhancement (THE), before moving to illustrate how some of the leading programmes related to THE and THEA were carried out in practice. The final two sections in this chapter will examine respondents self-reported accounts surrounding the nature of their efforts to organise around THE, as well as how and why these ambitions might be seen to require a formal movement to become fully realised. The following section, *Via*, will now begin reviewing some critical normative features of the various anticipated or ideal trajectory for efforts associated with THEA offered by respondents: Specifically, the two minor headings titled *Continuity vs Cessation* and *Milestones* to follow capture different temporal aspects related to advocates intended routes toward THE.

#### *Continuity vs Cessation*

One critical area of investigation which I sought to address through my interactions with the activists I encountered, was whether there was, in fact, a hypothetical end-point at which the efforts associated with THEA were expected to become obsolete. I hoped discussion around this point would prompt my respondents to reflect upon and formally-articulate the imagined ends related to the cause. Sure enough, responses to this line of inquiry were varied and revealed the range of ambivalences my respondents had towards the transhumanist movement. For instance, some of those who I interviewed believed the transhumanist project could be potentially infinite in duration. For these respondents, transhumanism was synonymous with the process of constant change and improvement, with the transhumanist trajectory a continual process with likely no end, as humanity comes to explore and adapt to extra-terrestrial environments, and launch new efforts to improve on the infinitely complex constitution of human biology.

For these transhumanists, the question of whether there was a hypothetical end-point or conclusion to the transhumanist project was likened to asking whether there was an end-point for civilisation itself; as the two were taken as synonymous. Others maintained that while there was a kind of assumed boundlessness within the transhumanist programme, such technological ambitions should be limited at a point by broader-based social considerations. In this respect, Mormon transhumanist Lincoln Cannon notably suggested transhumanism is essentially a perspective on human nature, specifically the potential inscribed within humanity's technological transformations. According to Lincoln, the fundamental perspective of transhumanism is two-fold: A) an observation that humanity has changed over time and B) an aspiration toward the injection of intentionality into that change. In the framework of this perspective, Lincoln expects the only practical limits to transhumanism are those imposed by logic and physics, but also notes that the practices associated with the movement can – and indeed should – also be constrained by socially-derived ethical limits.

A vocal contingent of the respondents I encountered viewed transhumanist-style longing and impulses for self-transcendence as an ambient or even integral property

of humanity itself, and as such would always be synonymous with human existence. Similarly, other respondents suggested the basic premise of transhumanism had already been accomplished in a certain sense. On this point, Chris Monteiro had the following to say:

*“...I'm probably a minority among transhumanists [...] in that I think it's already here. I think transhumanism is not something in the future, [...] I think we can see it all around us, it is something that has happened and will continue to keep happening barring... things. My go-to example is how the human brain is restructuring in response to technology. [...] Some people say: 'oh in the future we might be able to augment our brains with technology', no, we already have.”*

**Interview with Chris Monteiro. Fisherman's Wharf. San Francisco, CA. 12<sup>th</sup> August 2016.**

This extract illustrates how some advocates chose to normalise their ambitions by drawing a direct analogy with what are imagined to be contemporary trends related to emerging science and technology. It is reasonable to expect this framing works to minimise the distinctiveness of transhumanism effectively, and with it then both downplay the more elaborate or fantastical claims associated with the movement, while giving topical credence to the ideas aligned with the cause. Similarly, Aubrey De Grey expressed to me how he felt somewhat uncomfortable being allied with the transhumanist agenda because he was instead focused on emphasising the *continuity* of transhumanist ideas with existing perspectives towards science and technology already accepted by the mainstream public:

*“It seems to me the language, the rhetoric that surrounds transhumanism is often overly focused on the idea that the goal is to become something unrecognisable [...] and I don't see things that way. [...] I see this as all about a process of simply doing what we've already been doing. Developing medicines to postpone and alleviate and perhaps entirely prevent the ill health of old age is just medical research. [...] I feel that the language of transhumanism is counterproductive. It exacerbates the opposition to what we're doing.”*

**Interview with Aubrey De Grey. Town & Country Resort, Fashion Valley San Diego, CA. 6<sup>th</sup> August 2016.**

Here Aubrey suggests advocates for THE, at least in the case of biological longevity, would benefit from increasing their focus upon how their ambitions might be thought of as legitimately comparable – or even directly co-extensive – with existing programmes of biomedical research and development. This approach, that is, attempting to explicitly align the immortalist project with mainstream scientific and medical practices, can no doubt be seen as a strategic move intended to domesticate and lend credibility to the transhumanist agenda. To be sure, within democratic societies the long-term sustainability of programmes related to THE are – from both an economical and ethical point of view – in no small part dependent on how public-acceptance is established and maintained. From this perspective, Chris and Aubrey's responses can be seen as attempts to charitably qualify the current standing of the transhumanist movement by essentially suggesting the fundamental, underlying sentiment of transhumanism more-or-less seamlessly matches the 'ordinary' or default modern-orientation towards science and technology.

Despite the generally accepted transcendental value to the scientific method among many of my respondents, and with it the tendency for advocates to appeal to 'pure' objective, value-neutral science as the ideal engine with which to facilitate technology-derived human enhancement, there were also those who adopted a more nuanced perspective towards the standing of human intelligence. In this respect, at least some respondents I encountered displayed a level of critical self-awareness as to the potential limitations of rational human agency. To be sure, some advocates, in-line with the critical post-humanist philosophical trend, went as far as to suggest that our existing notions of intelligence itself had imposed significant constraints on human understanding. On this topic, Andrés Gómez Emilsson suggested transhumanists – and human beings more generally – operate with an impoverished notion of intelligence, or one which is overly human-focused. Again, this is another instance where someone who firmly identified under the transhumanist signifier was sympathetic to the idea of de-centring of human agency from all that is of significance and value in the world. In this regard, Andrés stressed what he considered to be a significant distinction between eastern versus western iterations of transhumanism, which he understood placed different levels of emphasis on personal autonomy – specifically, the capacity to place health, intelligence and happiness

under the command of free will. This theme is discussed at length in the *Politics* chapter to follow.

### *Milestones*

In addition to those who felt the transhumanist trajectory would be infinite, or had at least in part already been realised, there were also respondents who suggested there would most likely be specific; significant way-stations reached over the years to follow. Field-data related to this topic was collected around the node titled *Milestones*, which pooled input from various fieldwork observations and respondent-derived sources: For instance, my interviews explored this theme more or less explicitly using the question: “How will we know if transhumanism is succeeding?”. Even among those who believed the striving-impulse for technological self-transcendence under transhumanism could well be ceaseless, some noteworthy milestones were expected to be accomplished relatively soon. On this point, Journalist Alex Pearlman suggested full integration of the basic aims and ambitions of transhumanism into mainstream public-perception and discourse was a significant goal likely to be accomplished in the near-term:

*“I believe the goal of human enhancement, or a post-human future is a never-attainable goal. Meaning, that someone will always want to push more, go further. And that’s not negative. In general, I think the goal of pushing radical life extension, genetic enhancement, biohacking etc, into mainstream consciousness, even trendiness, will happen within 20 years, and we will know it when we see it.”*

#### **Survey response from Alex Pearlman**

Here, Alex expresses sympathy for the idea that to somehow become Posthuman, an aspirational motif used to motivate transhumanism across advocate communities during the 1990's (More, 1994), could very well be unobtainable. She not only mentions the range of instantiations of emerging technology which might be used for enhancement purposes but also, moreover the expectation of a corresponding significant increase in societal openness to radical alternations to the human in the years to follow.

The explicit reference to public integration in this extract is a testimony to the current tension between THEA and mainstream society, and the repeated importance advocates placed upon gaining increasingly broad-based public acceptance of the ideas associated with transhumanism. Zoltan Istvan, then leader of the *Transhumanist Party USA*, agreed the goal of public integration was central to the party objectives over the next decade. In this respect, during our interview, he told me the most central ambition for the *Transhumanist Party* platform was to replace faith with reason at a societal level, and with it promote a popular scientific-secular approach toward human-existence in place of other more faith or religiosity-based modes of living. Further then, Zoltan offered the following comment on the significance of the signifiers *transhumanist* and *transhumanism* in this context:

*“...I wouldn't even necessarily need to call it transhumanism if it was just like we could make that switch. We need that word because it sort of says, it's not just reason, it's what happens when you apply reason to biological entities that use tools, you end up with those tools wanting to change what you are, wanting to become stronger, better, less suffering that kind of thing.”*

**Interview with Zoltan Istvan. Town & Country Resort, Fashion Valley San Diego, CA. 6<sup>th</sup> August 2016.**

Again, this extract alludes to the imagined potential for transhumanism to deliver an enhanced framing of the rational application of science and technology, through promoting a compelling vision for the future which supersedes that which might be otherwise achieved through the mere exercise of reason alone. According to Zoltan, the ultimate purpose of the transhumanist movement should then be best understood as working to somehow usher-in a state of science-culture which he believes would be of most overall benefit to humanity. In this sense, transhumanism was understood to represent a shorthand synonym to capture the range of benefits which might arise from the exertion of rational-agency over the biological or environmental limitations taken to constrain the present-day human condition somehow currently. From this perspective, normatively speaking transhumanism should then again ideally provide a motivational force working to optimally orient societal perspectives toward the future uses and applications of technology for human betterment, in a fashion which

goes beyond the reductive, mechanistic rational-empiricism of the scientific method. Zoltan's apparently ambivalent position presented here captures the blurred lines between what might be called ordinary pro-science culture and transhumanism, and the tension between rationality versus motivation when it comes to justifying the research and development of technologies for human-enhancement. Further to this point, the next section will now review some of the main strategies to garner wider public-support which were proposed by respondents over the course of my interviews, especially those with direct reference to their understandings of the role and function of the transhumanist movement.

#### *5.4 TECHNE: The Artful 'Craft' of Transhumanism*

This section outlines the main strategic areas of focus raised by activists in the interest of realising the ambitions associated with human technological enhancement advocacy: It focuses upon the social dimension underlying these suggested interventions, and the intended or ideal role and function of transhumanism as an organised movement to assist in accomplishing such aims. Over the course of my data-gathering exercises, I worked to elicit specific value-attributions at work in the various suggested and expected routes to enhanced intelligence, longevity and well-being offered by advocates for THE. For example, one primary straight-forwardly normative question I asked my respondents during both the interviews and surveys was: "How would you improve the current state of transhumanism?" I hoped this line of inquiry would allow me to get a sense of what those advocates I encountered believed was 'going well' in their mobilisation around THE, and where tactical improvements could be imagined and perhaps feasibly implemented.

#### *The Importance of Public Image*

Some critically-minded respondents – who expressed a level of sympathy for the ambition of transhumanism, but notably did not wish to align themselves formally with the cause – indicated that they felt transhumanists would likely benefit from

tempering some of the more extravagant and utopian forms of thinking associated with the movement. For instance, independent film-makers Sean Blacknell and Wayne Walsh expressed that transhumanists should be less fantastical and steadfast in the characterisation of their prospective enhancement programmes, and instead move to publically recognise the high-degree of uncertainty surrounding emerging technologies. Sean and Wayne felt that by combining passion for science and technology with an increased tentativeness, public-facing transhumanists might make people more receptive to the notion of human technological enhancement, and also make the movement more amenable to an international platform, where the central transhumanist motif of perpetual, universal progress for humanity appears far from self-evident. On this topic, a recurring theme which emerged over the course of my interviews around this topic was that of public image, or popular perception of transhumanism. In this respect, my respondents were attuned to the need for garnering wider public support to realise the ambitions of the movement. For example, one interview respondent, a San Francisco based major investor in human-enhancement technology who wished to remain anonymous, stated they felt the best thing which could happen for transhumanism in the near future would be a visible, strong demonstration of capacity:

*“If we can bump someone IQ by ten points, if we can break some sort of human physiological record, if we can make people look younger, if we can turn grey hair dark again, if we can un-wrinkle someone’s skin, something visible, something obvious, something that immediately impacts them, I think that’d be huge. [...] The downside to this is it doesn’t get attributed to something like transhumanism. [...] The fear is that something like transhumanism will always be residual.”*

**Interview with Respondent ‘EW’. Conducted online via Skype. 14<sup>th</sup> September 2016.**

Further to this, some respondents such as Zoltan Istvan then-leader of the US Transhumanist Party listed ‘mainstream’ public integration of transhumanism – that is, transhumanism explicitly by name – as one of the most important immediate near-term goals for the movement. That said, as Cambridge Medical Student Daniel Hurt pointed out, despite general public support for new technical innovations which might lead individuals to exert greater control over the duration and quality of their



life, when such promises become combined into an all-encompassing programme of radical, high-tech transformation tends to remind people of the profoundly optimistic visions of the future presented throughout the 1960's and 70's, which have as yet failed to materialise. These two contrasting accounts between Zoltan and Daniel reflect the tension between the call to provide a compelling grand-vision for science and technology into the twenty-first century, and the perhaps the equally well-justified public scepticism which might currently surround any firmly stated promise of the inevitable coming of radical technological transformations.

Related to this point, as Lutheran Pastor Ted Peters suggested, transhumanism typically arises within cultures which are already highly sympathetic to the power and possibility of new technology, a value which appears to be often closely conflated with the assumedly wealth-building potential inscribed within high-tech consumer capitalism. This question prompted Ted to think in critical terms about the normative-ethical standing of present-day transhumanism, stating that he would above all encourage transhumanists to reflect more deeply upon the underlying purpose of technological developments, who he believed had an overwhelming tendency to assign what he described as a cardinal value to intelligence. In this respect, Ted suggested that in addition to an embrace of change in the human condition over time, one of the central doctrines of transhumanism was the idea that all evolution up until the current moment has been aimed at increasing intelligence, and as such present generations have an obligation to amplify or accelerate this trajectory. While Ted respected the fact that transhumanists were engaged in what they understood to be an attempt at taking rational-intelligent responsibility for the next stage of human evolution, he also believed transhumanism, at least in its present form, lacked the moral vision necessary to guide future applications of technology.

Similarly, some other the actors across the sites I observed were ethically concerned about the ethical risk of distorted public perception created by recent marketing discourse around commercial technologies, particularly the prospect of human-level AI. For instance, the IBM Watson debate opened with a discussion on the marketing associated with the software – particularly the statement "Watson has confidence", which Douglas Rushkoff took to be an overly anthropomorphic attempt to personify the AI into human form. A claim which was both unverifiable in propriety software,

and likely to significantly affect public perception as to the efficacy of the product. To be sure, this apparent tension between the moral versus functional dimensions to transhumanist thought was a recurring theme across the sites I visited and will be discussed at length in the *Existence* chapter to follow. My respondents agreed that transhumanism stands as a project which had been – or at least could be – quite significantly emboldened by drawing upon popular perceptions of programmatic over-lap with those more positive ideals conventionally associated with the European modernisation projects, such as perpetual wealth-creation and material progress. However, there was also a noticeable level of critical discussion around the possible damage to both public credibility and also moral-ethical standing of exhibiting historical short-sightedness when representing the movement – and indeed all of the deeply-seeded onto-philosophical-political assumptions apparently underlying it – as tied to unequivocal benefits for all humanity.

This inevitable, maybe even inescapable, difficulty in marrying the old legitimating meta-narratives of modernity to the new possibilities of an increasingly technology-saturated and dependent future appeared one of the most substantial problems repeatedly recognised – and referenced under different guises, usually antagonistically – by many advocates I encountered. Further still, this tension also speaks to probably the most highly coveted feature of transhumanism and THEA alluded to over the course of my research: The promise of Technological Human Enhancement Advocacy as a source of both compelling vision and conscious direction for emerging science and technology in the years to follow.

### *THEA as Techno-Humanistic Narrative-Building*

To be sure, a popular suggestion which was revisited over the course of my interviews with advocates for THE, was the possibility of transhumanism as a source of narrative-building. In this sense, several advocates suggested transhumanism worked to provide a shared set of positive motifs that could be used to ground human identity in the 21st century, and with it purposively orient future applications of emerging technology. This idea was expressed to me most directly by Oakland Futurist community meet-up organiser Scott Jackisch:

*“I think as transhumanists really the best we can do is create narratives that help guide scientists to co-ordinate around. And to also help the public co-ordinate around. And that's why I think transhumanism is a bad idea, as a name... and other people agree with me. That's why they changed it to HPlus instead of HumanityPlus and things like that. Peter and Natasha [Vita-More] agree to some degree about how you should brand it. We're not scientists for the most part. Some of us are, but for the most part we're not.”*

**Interview with Scott Jackisch, Trestle Glen, Oakland, CA. 15<sup>th</sup> August 2016.**

This extract is consistent with the viewpoint of other respondents who feel ‘Transhumanism’ is an undesirable banner for human enhancement advocates to associate with, and mobilise under. That said, Scott also raises the potential for the transhumanist movement to directly inform or influence the scientific enterprise by working to help somehow situate and coordinate scientific research and development within a coherent, human-centred and historically-informed framework. On this point, other respondents, such as Daniel Hurt, also agreed the role of technology is often understated in historical narratives. As such, the transhumanist movement could be useful in working to interpret historical events through the lens of changing technology, and with it perhaps also justify a continually changing sense of humanity. In ideal terms then, for those who I spoke with on this subject the practice of narrative building could serve to practically amalgamate both the rational and motivational aspects of THEA. They suggested one of the most significant roles for a THE advocacy movements should then be to firmly ground and socially embed those intended forms of technologically-derived transformation – taken, for whatever reason, to be somehow necessary and appropriate – within a continuous, wider historic-narrative.

Once again, these findings reveal the multiple ambivalences my respondents held around the nature and status of transhumanism. Many of those I spoke with were found to be sympathetic to the idea of the transhumanist movement, while also simultaneously critical of its practical usefulness in promoting the development and broader societal adoption of technologies related to human enhancement. One noteworthy interview respondent – a San Francisco-based major investor in

breakthrough technology start-ups, and active member of the Bay Area Rationalist community – agreed one of the most useful roles for the transhumanist movement was to create a coherent framework for interpreting the emergence of new technology, while however adding the following qualifier:

*“ [...] a question is whether transhumanism is even the right locus for this. So, I mean arguably a lot of why I identify with the rationality community, some of it is because they have memes that I value a lot. And there's substantial overlap. Most of the rationalists are also transhumanist, so you could argue that it's a subset that has an additional meme on top of it. But it was Eliezer Yudkowsky's writings on the internet... Hundreds of thousands of words that formed our holy texts around which we could unite and we have a shared language and shared ideas and terminology, we have a shared identify, we actually do [...] I'm like, do we have that for transhumanism? And is transhumanism a thing you can unite around?”*

**Interview with Respondent 'EW'. Conducted online via Skype. 14<sup>th</sup> September 2016.**

In this extract, EW speculates that the contemporary social and organisational format of transhumanism could well be in some sense inferior to that of the rationalist movement. The rationalist community, which no-doubt shares some significant ideational overlap with the transhumanist movement – not least a significant affinity for the apparently exclusively human intellectual faculty of reason – is an internet-based group of rationality advocates associated with the work of AI Researcher Eliezer Yudkowsky and Economist Robin Hanson. Essentially, EW then views transhumanism as a subset of the broader rationality community, and as such transhumanism lacks what he calls the 'object-level beliefs' necessary to make it cohere into a primary identity and form a strong movement. EW suggested the process of rationality and beliefs stemming from the application thereof – were substantial enough for the rationalist community to have built a coherent sense of identity around. For EW the rationalist community was then tied together by these shared beliefs, and actively engaged in a shared mission to actualise the elaborate, technology derived ends – including, but not limited to the singularity, mind-uploading and cryopreservation – endorsed by those within the rationalist movement. Despite some reservations around the pragmatic usefulness of contemporary

transhumanist activism, at the very least, a key role for transhumanism (and indeed THEA more broadly) which my respondents often agreed on was that of working to situate the practices associated with THE within a rationally-informed historic context. This perspective they hoped might then ultimately work to compel some form of affirmative action.

## CONCLUSIONS

The chapter has explored how THE and THEA type programmes of are articulated and enacted in a range of different settings and contexts by those actors who are interested in the prospect of technological human enhancement. It is apparent these schemes of activity and concern include both external colonisations geared toward re-constituting features of the natural environment in Kapp's (1877) sense, as well as other internal colonisations directed toward influencing human symbolic culture through the practice of narrative building. It has illustrated that although numerous, the various ideal and intended directions for THE conceived of by advocates undeniably share some common features, particularly a strong – although not necessarily deterministic – relationship with the idea of *teleologically-ordained rational progress* (Braidotti, 2013). Despite this general overarching tendency, my respondents offered numerous sophisticated accounts of their ambitions and activities which are not captured by existing critical posthumanist analyses. My observations across the online spaces where the practice of Technological Human Enhancement advocacy conformed to the tacit assumption of a teleological, human-centred future conventionally taken to underlie both the enlightenment humanist and transhumanist project(s). Noteworthy in respect, however, is THE advocates apparently enlightenment-inspired web-based collaborative efforts to formally delineate the various projects associated with transhumanism in detail, which represent entirely novel attempts at chronicling the contemporary format of human technological enhancement using emerging web-based wiki-media. These efforts stand as sophisticated attempts to outline the variety of activities seen to comprise THE and THEA in an all-encompassing, referential format, no doubt in a manner emulating the Enlightenment's encyclopaedic efforts to record and synthesise rapidly emerging forms of knowledge. Similarly, the imagined potential for THE observed

across the physical field-sites attended – technical programmes focused on delivering radical improvements to human intelligence, longevity and wellbeing – was also frequently characterised by reference to other Enlightenment-derived motifs such as individualism, autonomy and the role of the state versus the free-market in providing access to enhancement modalities. In this sense, the public dimension to technological human enhancement was a recurring theme during my discussions surrounding the practical carrying-forward of programmes associated with THE.

Not least, respondents appeared highly attuned to the challenge of managing or mitigating the tension between rational versus motivational aspects of THEA, and the public-framing of THE as a practice either radically departing from or in continuity with existing societal approaches towards emerging science and technology, as well as broader-based normative accounts of the nature and status of humanity. This line of thinking led my respondents to reflect meaningfully on the potential value which might be added by an activist/advocate social movement in mediating the public-standing of the efforts associated with THE. Here they frequently raised the practice of narrative building, or formation of compelling historically-informed narratives perhaps emphasising the continuity of technological human enhancement with existing modernist ideals, such as scientific and technical progress and perpetual wealth-creation through technology-driven capitalism. As we have seen, there is undoubtedly a strong current within transhumanism, as evidenced by internal taxonomies of the movement, which aspires to perfect the individual self: To be sure, the stated range of objectives associated with THEA outlined here have various implications for public and institutional policy within those liberal democratic societies where the practice was observed. As such, my respondents recognised and spoke about the political dimension to their human-enhancement centred ambitions. The next chapter will examine the relationship between THEA and existing political structures and mechanisms in more detail.

# 6

## POLITICS

*“Madness is rare in individuals – but in groups, political parties, nations, and eras, it’s the rule.”*

*-Friedrich Nietzsche **Beyond Good and Evil** (1886)*

Parallel to the high value Nietzsche’s philosophy placed upon autonomous self-direction in guiding the will to power, transhumanists today have come to display much ambivalence towards the role of the individual versus the collective in realising their ambitions. The two previous chapters have described the typical range of constituents seen to be involved in Technological Human Enhancement Advocacy and reviewed the variety of intended directions for technical and social schemes found to be associated with the practice. This chapter will now explore the range of political beliefs found combined with advocacy for technological human enhancement across the spectrum of sites attended over the course of the fieldwork. This chapter set out to address the following research question: *What kind of political beliefs are associated with THEA?* As the previous chapter indicated, my respondents were highly aware of the political dimension to THEA, and how political factors influenced THE projects more generally. Speaking in the broadest possible terms, the political beliefs and belief systems I encountered appeared to be underpinned by a sense of upcoming – or perhaps ongoing – radical change ushered in by emerging science and technology soon set to affect virtually all domains of human experience. As such, responses to this change then tended to be split between those who wished to either somehow purposefully reform or otherwise entirely circumvent existing structures of scientific and public governance to realise their future enhancement-oriented ambitions.

The chapter is broken into the following sections, which reflect the range of different attitudes towards politics exhibited by respondents over the course of the study. Firstly, in *Atrophy* it opens by providing an overview of my respondent's positions

towards the existing political status-quo, which tended to be expressed in largely negative terms. This section refers to the apparent commonplace expectation that new forms of emerging science and technology might work to destabilise – or displace somehow substantially altogether – conventional structures of democratic governance in the years to follow. This belief then typically prompted a wish for purposeful action at the level of policy to steer both the technological drivers and emergent social effects of such coming disruption in a direction that would be of most benefit to humanity. Accordingly, the chapter proceeds to explore how the topic of *Activism* relates to THE advocacy by recounting some of the schemes of politically-oriented activity which I found actors engaged in across the spaces associated with THEA. This section explores the interface between THEA philosophy and political action including recent attempts to enter the arena of conventional or mainstream political discourse through mobilisation under the *Transhumanist Party* banner.

Further to this point, the chapter then moves to examine how the notion of effectively maximising personal *Autonomy* through emerging technology appeared to be an ideal underlying a significant number of the projects and practices I found associated with THEA. Correspondingly, many of those THE advocates who I encountered tended to assign supreme importance to some combination of both personal and economic liberty to successfully carry forward their endeavours. The chapter concludes with the suggestion that politicized forms of technological human enhancement advocacy – including but not limited to activities carried through mainstream political channels using social movement-type activism – essentially amount to attempts at mitigating significant tension between counter-culturally dissident, investigatory and disruptive nature of THE, and the otherwise securitizing, cohesive function of Western Nation State Democracy.

## 6.1 ATROPHY: The Disintegration & Inertia of Contemporary Politics

In line with the firm expectation that technology can – and perhaps therefore inevitably would, or at least should – usher forth radical changes across virtually all



domains of human concern in the future, I encountered several advocates who believed THE required new approaches toward politics and governance in the twenty-first century. For many of my respondents, this belief was expressed by reference to the perceived significant limitations and shortcomings of contemporary political milieu: This section outlines the range of negative attitudes towards mainstream politics expressed by respondents over the course of the study, as well as reports of dissatisfaction with conventional political structures.

### *Inadequacy of Party Politics*

Perhaps unsurprisingly, given the very nature of political discourse, my respondents displayed a great variety of attitudes toward mainstream politics. While on an elementary level these findings might be expected to conform to the range of political diversities found across the general population, it was apparent those who I spoke with were both able and willing to offer highly detailed, and often explicitly technological human-enhancement based, justifications for their political orientation. Specifically, the various political positions and associated technical motivations I encountered tended to be framed in terms which were directly antagonistic toward the existing political status-quo. Broadly speaking then, a standard feature reported by respondents across the range of sites I attended was a general feeling of discontent toward existing socio-political arrangements: This level of disaffection ranged from those who reported being somehow disappointed with party-politics to those who outright rejected the idea of centralised, state-based political authority.

Some of the most substantial objections my respondents had toward the existing political establishment were directed at the protractive or deliberative elements of nation-state based democracy, particularly the prohibitive function of governmental regulation *vis-à-vis* scientific and technological research and development. For instance, many respondents suggested contemporary state-based systems of democratic science and technology-focused regulation are too slow-moving to effectively accommodate and support the rapid emergence of new technologies pertaining to human enhancement. For some advocates who were at the limited-government extreme on this point, leading-edge technologies were understood to be

so fast-moving and fundamentally disruptive, that any artificial, state-based efforts to contain their development would be profoundly damaging to cultures of innovation, effectively stalling the technological development process. At worst, they feared this would perhaps with it then also give an undue economic-competitive advantage to other major technologically-industrious nations without such western-style ethical-regulatory handicaps. No doubt this anti-regulation type perspective has many inbuilt ontological assumptions related to the emergence of technology and complex systems – with some commentators, such as *WIRED* magazines' Kevin Kelly using a similar de-centralised, techno-utopian framework to espouse a teleological-progressive view of biological evolution (1994: 2011).

Further to this widely held assumption of a kind of insidiousness to restrictive government measures designed to moderate the emergence of new technology, in more proactive terms, many respondents also agreed that contemporary political actors were not adequately addressing the most important issues surrounding emerging technology. In this regard, some respondents raised the apparently low level of both technical literacy and rate of adoption of new technologies within the political establishment. On this point, I.T. Administrator Chris Monteiro – co-founder of the *Transhumanist Party UK* and major contributor to *HPlus Pedia* – spoke of transhumanists disdain for the existing political system, and how emerging information technologies might perhaps be harnessed to enhance the quality of future democratic governance:

*“Certainly, the political establishment is hated, it's perceived as being very slow to respond and out of touch with common people, [...] we need something better. The discussion we were having earlier about future modes of governance involving AI, prediction markets, evidence based policy... I mean let's be honest everything always works better when you've got an informed electorate, absolutely.”*

**Interview with Chris Monteiro. Fisherman's Wharf. San Francisco, CA. 12<sup>th</sup> August 2016.**

This extract refers to a strong sense of disaffection for the political establishment apparently commonplace among THE advocates, and the potential benefit of the computer-science derived use of electronic algorithms to edify both the public and

government policymakers with an elevated level of information to orient both individual and collective forms of decision making purposefully. No doubt, such a notion of using new forms of information technology to enable a fuller realisation of the promise of deliberative-democracy echoes early European Enlightenment ambition for the modern political project, and is of course directly in line with THE advocates highly-pronounced enlightenment-modernist sympathies outlined in the previous chapter.

Correspondingly, many respondents suggested Western Democratic Governments had reached a state of political inertia in recent years, and thus something new and radical – such as transhumanism – was needed to effectively shake-up the political establishment. To be sure, such a viewpoint is certainly in line with both the assumed highly disruptive character of technological innovation (Christensen, 1997), and equally the popular associated suggestion that somehow emerging technologies work to substantially displace or even altogether dissolve social-structures of stability and order. This viewpoint is radically accentuated in the Accelerationist philosophy associated with contemporary British Philosopher Nick Land (MacKay & Avanesian, 2014). From an altogether more nuanced point of view, respondent EW reckoned the major parties being deadlocked was a factor but not necessarily a cause of people apparently “re-focusing their identities” in increasingly novel directions – such as transhumanism – in the twenty-first century. Instead, he suggested these were attempts made by individuals to return to something closer to an ancestral environment by coming to identify with subcultures more so than nation states – with the internet enabling identification with a much more precisely defined smaller group.

Other respondents presented more abstract, process-oriented models surrounding the role of government. For example, Mormon transhumanist Lincoln Cannon – who described himself as ‘somewhere between a libertarian socialist and independent moderate’ – believed the function of government should be the formalisation of decentralised empowerment. For Lincoln, the future of political discourse would be shaped by an “evolutionary shift in reputation” – on which he believed all interpersonal relationships, communities and governments are based – and the move toward a kind of exponential ‘internet of things’ promoting rational, complex co-

operation between humans and machines. According to Lincoln's vision, this futuristic new way will consist of decentralised systems built on open-source code working to generate feedback loops designed to “tighten the bond between trust and behaviour” across all domains of human experience. To be sure, in metaphysical terms this vision of perpetually scaling-up networked intelligence echoes Jesuit Palaeontologist Teilhard de Chardin's (1959) notion of the *noosphere* which holds the goal of history to be an apex of thought and consciousness. This topic will be discussed in greater detail in the *Existence* chapter to follow.

### *Relevance of Party Politics?*

In addition to those who believed existing, conventional political arrangements were insufficient to support the transhumanist project(s) - or, indeed that THE issues had as-yet achieved relatively limited representation in mainstream political discourse – there were also some respondents who suggested transhumanism is apolitical, or at least that transhumanists and those others actively working to lead the development of advanced technologies shouldn't concern themselves with political matters. For example, Andrés Gómez Emilsson, former President of the *Stanford Transhumanist Association*, suggested involvement with everyday political concerns could distract leading-edge scientists and investors from advancing the programmes associated with THE. In this respect, he told me:

*“[...] from talking to people in the communities I belong to, my sense is that distracting them with mainstream politics would actually be very bad for the world. [...] somebody [...] who's actually working very hard and donating 40 thousand dollars a year to these charities and saving the life of 11 persons every year by his or her own work. People like that who are extremely productive and prolific in their fields, distracting them with talking about trump is very dis-valuable.”*

**Interview with Andrés Gómez Emilsson. Colma, CA. 14<sup>th</sup> August 2016.**

No doubt Andrés' perspective appears sympathetic to the notion of a Scientific-Technocratic elite who ought to be granted a level of professional autonomy to operate in some sense outside of ordinary mainstream political discourse. Sure

enough, consistent with this position, Biogerontologist Aubrey De Grey told me he didn't directly participate at all in political processes himself, nor did he tend to give any thought to politics, since he had “too much else on his mind”. When I asked whether he had confidence in the efficacy of the political process, in no uncertain terms, Aubrey replied he did not.

Other respondents saw the insufficiency of mainstream politic *vis-à-vis* transhumanism in more practical-pragmatic terms. Cambridge Medical student Daniel Hurt suggested any attempts at getting transhumanist issues into mainstream political discourse would fail until it was too late since technologies would need to come to fruition before effectively catching the public's interest:

*“I think in today's climate no because people are so bombarded with amazing medical developments and news stories that are making something out to be an amazing breakthrough when actually it's just some obscure stage one clinical trial that will probably come to nothing. I think it's difficult to peak the general public's interest in these things because they'll just think oh it's like another weird kooky thing that might work out might not, we probably won't see it for ages if it even works...”*

**Interview with Daniel Hurt. Conducted online via Skype. 9<sup>th</sup> August 2016.**

Here Daniel raises the epistemic standing of emerging technologies, and the difficulty in building sustained upstream public enthusiasm and support within contemporary cultures saturated by science-media hype. As such, he reasoned technologies with the potential to radically augment human experience would need to have arrived and had a tangible effect on public life before they would be taken seriously at the level of governmental policy. On a similar note, at least one other respondent raised the importance of a demonstrable quality to THE and went further to extend the value Daniel assigned to public verifiability to encompass political visioning more generally. On this point, Abelard Lindsay had the following to say:

*“The other thing is that actually demonstrating something instead of just proposing it, with actual technology and moving the needle forward and actually demonstrating that this is actually going to work is the kind of thing that makes*

*people re-consider their vision. The thing that made people reconsider communism is that it didn't work..."*

**Interview with Abelard Lindsay. Java Beach Café. La Playa Street, San Francisco. 12th August 2016.**

In his statement above Abelard appears to suggest fallibility – perhaps akin to the notion of falsifiability (Popper, 1963) – factors into visions for the future shaped by technologies of human enhancement. From Abelard's perspective, and also equally line with the evidence-led ethos of rational empiricist style thinking, much in the way that technologies of human-enhancement should have a strong evidence base, systems of politics and government policy ought to also have a publically demonstrable, efficacious quality to them. Despite the importance some respondents assigned to evidence-based reasoning, others went beyond the available facts to instead launch their political orientation from a more exponential viewpoint, which attempted to deliberately see well beyond the conditions of human life at present. These types of bold, ad hoc extrapolation appeared especially frequently in survey responses.

In addition to my interview interactions around the subject of mainstream politics then, I also sought to capture political perspectives from a more extensive remit of those associated with THEA through the distribution of electronic surveys. Specifically, my e-mail survey posed the question: 'How, if at all, does your transhumanism affect your attitude to mainstream politics?' I hoped this deliberately open phrasing would prompt my respondents to comment openly on the relationship between THEA and political systems. Some survey responses suggested politicians today are overly focused on social effect rather than biological cause when it comes to operationalising the problems affecting humanity, and where then accordingly dated and out-of-step in their thinking. Biohacker Rich Lee offered the following:

*"Whenever politicians talk about feeding the hungry, I'm thinking about how to make humans who can thrive on 10% of their current caloric intake. Hunger is the beast we feed, but the real problem is that our bodies need food. When they talk about creating jobs, I am scheming up ways that so that nobody would ever have to work again (unless they wanted to). Pension shortages aren't the problem; forced*

*retirement due to aging is the problem. Mass shooting are a problem, but only because people feel pain, can't regenerate, and die. Cigarettes aren't the problem; cancer is the problem.”*

#### **Survey Response from Rich Lee**

No doubt, this extract testifies to both the exponential-minded and utopian elements of transhumanist thought. Moreover, it conjures and expresses a strong preference for a highly *biologised* understanding of the human, and societal reform based on gene-level enhancement-focused interventions into the biological constitution of the human body. To be sure, this perspective can also be viewed as highly inflammatory and naïve when taken in the historical context of the many large-scale human atrocities enacted using state power under the purview of science throughout the twentieth century. Here Rich raises the relationship between transhumanism and what Neo-Foucauldian Social Theorist Nickolas Rose calls *Biopolitics* (2007), or the gradual move toward increasingly biology-centred models of a citizenry, and the corresponding state administration of strategic public interventions to best manage or govern the innate biocapital of human populations.

Correspondingly, another survey response, from Engineer Walter Crompton – who had become involved with the *Transhumanist Party USA* through internet discussion forums – voiced significant concerns toward the prospective future combination of the bio-technical interventionist-type ambitions of transhumanism with strong-state political power. In response to this same question, Walter suggested:

*“It makes it all the more frightening, as [mainstream politics] continues to be narrow, war-mongering and anti-humanitarian. These tendencies on the steroids of transhumanism are something to worry about.”*

#### **Survey Response from Walter Crompton**

Undoubtedly, the sentiment conveyed in Walters response detailed above – raising the potential for new atrocities and abuses set to be committed using the articles of transhumanism – is consistent with the position of so-called *bio-conservative* critical commentators regarding the prospects of biotechnology and genetic engineering (Fukuyama, 2002; Habermas, 2003; McKibben, 2003). Further to this point, Walt

had strong reservations as to the future path for humanity in seeking to transform itself using radical new emerging technologies, adding the following sober statement on his anticipated transhumanist trajectory:

*“I suspect we will not reach the liberated future smoothly, and I anticipate at least one more world war. That war is likely to be terrible beyond words and the outcome is uncertain. The leadership to move the masses positively does not exist, and is not on the visible horizon. In my best vision, when and if we get there, I see great abundance and vast options for everyone. In my worst vision, I see eternally warring super-states, led by a small elite, with the masses having been liquidated.”*

### **Survey Response from Walter Crompton**

This statement neatly captures another recurring suggestion which came up frequently during my interviews, namely that apparently ever-precarious use of high-technologies in the twenty-first century are somehow moving humanity between the twin-possibilities of great positive transformation, versus potentially also total planetary annihilation. Such a polarised perspective is also consistent with recent accounts of an ongoing shift in the public's political-ideological orientations, which some have suggested could soon become increasingly split between proactionary versus precautionary attitudes toward risk when dealing with proposed highly complex technical innovations, outcomes of which could be catastrophic and potentially irreversible (Fuller, 2012; 2013). A more detailed account of the relationship between THE advocates and a largely proactionary orientation toward the generation of scientific and technological knowledge is presented in the final section of this chapter. Walter's recognition of the possibility for a dystopian technology-derived future is contrary to the otherwise utopian, radically optimistic tendencies shown by advocates across many field-sites I attended, and once again speaks to the range and complexity of views my respondents held towards the assumed power and possibilities underlying THE in the years to come.

Considering the findings detailed above, overall my respondents reported relatively low levels of political participation in the form of voting. However, that said, I also found many of those who did actively participate within the USA context tended to vote Libertarian, with respondents emphasizing the importance for individuals to



determine the nature and extent of their interactions with emerging technology. No doubt it is reasonable to expect this noticeably high-level of Libertarian sympathy within the THEA-related population(s) I encountered is directly related to the more individualistic, self-determining tenets of transhumanist thought, which appear to stand as present-day remanences of the movements initial foregrounding in European Enlightenment political philosophy. Again, this trend will be discussed in more detail in the *Autonomy* section to follow. This section has provided an overview of the range of attitudes toward mainstream politics found to be associated with THE advocates, which appeared mostly split between either a total disavowal of political authority or, more commonly, sympathy to reform existing conventional party-political processes to make them somehow more amenable to realising the ambitions of THEA. It is now appropriate to examine how specific forms of political activism were envisaged and justified by THE supporters in the interest of garnering increased political influence or governmental reform.

## 6.2 ACTIVISM: Tensions Between Virtual & Embodied Politicking

Those who believed in the possibility and desirability to reform – or somehow otherwise repurpose - existing political means to make such edifices more likely to serve the ends associated with THEA represent a distinctly activist subset of THE advocates. Their viewpoints, as well as associated schemes of activity, are deserving of further attention. Given the high levels of dissatisfaction with mainstream politics reported by those who I interviewed, many of my respondents appeared highly motivated to steer contemporary political discourse in a direction which could potentially be more conducive toward advancing the development and dissemination of technologies related to human-enhancement. As such, a significant portion of my conversations on politics across the various sites found associated with technological human enhancement advocacy explored the idea of practical activism around the motif of THE. This section recalls the multiple forms of social and political activism which my respondents suggested could be somehow beneficial toward furthering the cause(s) of THEA via political channels.

### *Increasing Political Recognition: The Transhumanist Party*

Consistent with the degree to which conventional 'Left' versus 'Right' political distinctions appear to be borne-out in transhumanist discourses according to existing literature on this topic (Hughes, 2004), many responses showed a high level of awareness as to how major mainstream political actors approached matters related to THE. Some respondents made explicit reference to the party-political orientations toward science and technology policy carried forward in the mainstream political arena. For example, Steven Umbrello, managing director at the IEET, pointed out how funding for science is non-partisan. Here, he cited the Republican efforts to creating doubt in the value to climate science which he saw as contrasting with the Democratic party's more favourable history of including science and technology policies as part of their platform – such as federal funding into the *National Nanotechnology Initiative* (NNI). Steven's perspective is then not entirely dissenting from the political establishment, but rather precisely located within conventional exiting two-party political schemes. In this sense, despite whatever misgivings my respondents had towards mainstream party politics, virtually all the advocates I encountered shared a strong desire to achieve an increased level of Political Recognition for the various aims and ambitions associated with THE. More specifically then, several those who I found weren't wholly opposed to state-based political authority suggested an appropriate government response might somehow efficiently support the safe and equitable development of new technologies. As such, conversations with these respondents typically revolved around how a sympathetic state might best work to mitigate the apparently inherent risk and uncertainty associated with emerging science and technology, while also simultaneously supporting a culture which proactively encourages the research, development and wider public acceptance of scientific and technological innovation.

Several THE advocates I spoke with also felt existing forms of nation-state mass democracy could not only effectively design and implement policies which effectively served THE interests, but that in fact there was evidence some forward-looking governments had already begun to make preliminary movements in this direction. In a manner resembling efforts to domesticate transhumanist ambitions as

being in continuity with ordinary modern approaches towards technology and science referred to in the previous chapter, some politically-engaged respondents chose to characterise political mobilisation around THE by drawing analogy to existing science and healthcare policy initiatives which have already gained a level of mainstream acceptance and traction. For example, David Wood, Chair of *The London Futurists* and Chair and Treasurer of the *Transhumanist Party UK*, advocated for the so-called Longevity Dividend. This phrase refers to the idea that strategic investment into anti-ageing therapies will pay a significant financial and social dividend in the future –emphasizing the potential net social benefit of enhancements to longevity.

More often than not, these discussions also made explicit reference to recent spate of THE activist attempts at generating increasingly mainstream political traction through forms of organisation under the *Transhumanist Party (TP)* banner, which has been enacted in various formats within democratic countries on both sides of the Atlantic: The TP platform then represents an attempt to popularise the interests and ambitions of Transhumanism effectively, and with it hopefully gain widespread public support for the transhumanist movement. In other words, correspondingly with the transhumanism as techno-humanistic narrative-building strand of thinking outlined in the previous chapter, the transhumanist party banner was then typically evoked by advocates as a practical means to formalise and disseminate the various aims and ambitions associated with THEA. Zoltan Istvan – then Presidential Candidate for the *Transhumanist Party USA* – spoke of the need for a broad-based cultural shift to accommodate transhumanism (taking precedent from the prior success of the environmentalist movement at entering public consciousness and influencing policy), as well as the importance of his own highly embodied approach toward transhumanist activism:

*“...I think the established [political] process is good [...] but what we also need is a cultural shift, right now transhumanism is some weird thing, I went to the deep south on my campaign bus and everyone thought that I was insane because they live in this world where... 'you have a chip in your hand? ahhh' [...] if you don't confront that then it never really grows, so you have to go out there and make yourself known. You have to do that in physical form, you can't do that from the internet, [...] you have to*

*go to their house, knock on their door and hand them a bumper sticker, talk to them, make eye contact with them... [...] I do it that way, and the secret of my success has been a huge amount of physical activity, I think I'm the only one out there that's really really doing something kind of physical."*

**Interview with Zoltan Istvan. Town & Country Resort, Fashion Valley San Diego, CA. 6<sup>th</sup> August 2016.**

In this extract, Zoltan problematizes the contemporary social standing of transhumanist ideas, and correspondingly, the mostly web-based character of much existing THEA discourse. Zoltan apparently believes the existing democratic political system has value, but that the practical realisation of transhumanism within this framework can only be achieved using what might be described as more traditional offline public outreach and engagement-type exercises as opposed to a merely online discussion. On a similar note, Respondent EW notably suggested online discussions – such as those made possible through social networks including Facebook groups centred around THE – are a great way to dissipate energy, but was equally sceptical such exchanges lead to any useful outcomes to further the aims and ambitions of THEA. Sure enough, the sizable challenge of translating online enthusiasm into offline substantial, real-world applications came up repeatedly over the course of the conversations I had on the topic of transhumanist activism – an issue already well captured in recent critical commentary on internet-centrism and solutionism (Morozov, 2011; 2014).



Figure 15: Zoltan Istvan 'The Transhumanist Candidate' US-Presidential Campaign Presentation at RAAD Fest. [Photo taken by Author August 2016].

At the very least, highly visible displays of transhumanist intent – exemplified by Zoltan's presidential campaign tour, where he drove a coffin-shaped tour bus across the United States – raise public awareness toward the transhumanist cause, and might perhaps also in time contribute to a greater acceptance of transhumanist ideas. That said, the deliberately sensationalist approach employed by Zoltan during his bid for the presidency was not unanimously well-received by all of those who I spoke with on the subject. When asked to characterise these efforts, responses ranged from those who made tactfully disparaging comments – for example, calling the campaign “highly amusing” (Ben Goertzel) – to others who more optimistically believed Zoltan's strategy could enable him to "get ideas across which otherwise wouldn't be conveyed" (Paul Spiegel). If nothing else, the Transhumanist Party USA publicity-drive achieved a level of success in at least raising awareness toward the transhumanist movement and its most frequently touted longevity cause, which may or may not be a good thing for the social standing of transhumanism overall, depending on how charitably publics judge such an introduction to THEA. All things considered, through this activist framing transhumanism could be seen as a movement which, having outgrown its online philosophical inception has since morphed into a set of real-world social campaigns, proponents of which typically

hold ambitions to cause downstream political effects, the likes of which appear as yet mostly undetermined.

*'Hands off': Should THE be Politicized?*

Sure enough, given the plethora of ideal intended functions for the movement, and indeed the plurality of suggested loci to focus on, perhaps unsurprisingly there was a high level of ambivalence as to the legitimacy and coherence of transhumanist political activism expressed by many respondents. For instance, long-standing figures within the transhumanist community reported doubts as to the effectiveness of Zoltan's political strategy – although not necessarily on the grounds of transhumanism being somehow incompatible with party politics. For example, I had the opportunity to speak openly with Utilitarian Ethicist David Pearce – who was influential toward the formal institutionalisation of transhumanism through co-founding the European *World Transhumanist Association* (WTA) with Nick Bostrom in the 1990's – about the current state of the transhumanist politics over the course of a vegan meal in Cambridge, while I attended apotheosis international's *Transhumanism: Resituating Humanity* conference. In conversation, David was dubious as to whether Zoltan Istvan's efforts at building transhumanism into a mainstream political party would achieve success as it appeared overly focused on longevity as opposed to intelligence or wellbeing. Interestingly, this criticism appears made at the level of proposed policy – which, in Pearce's viewpoint, was too narrow to generate mass popular appeal – rather than the efficacy of mobilisation under the Transhumanist Party banner. From this, we can infer Pearce believed that while the interests of the wider THEA community were not adequately captured and served by the *Transhumanist Party USA*, there could be value to domesticating transhumanism through existing, democratic political mechanisms. Further to this point, David also notably evoked conventional leftist-type political allegiances, expressing sympathy for James Hughes' left-leaning so-called *techno-progressive* orientation to transhumanism associated with US-based think-tank the IEET.

Indeed, virtually all my respondents agreed Zoltan's presidential campaign was not a serious attempt at winning the presidency, but rather an elaborate effort to gain

publicity for the transhumanist movement. In line with David's sceptical perspective on the matter, other transhumanists doubted whether Zoltan's political platform could ever speak for interests of the broader transhumanist community. On this point, Chris Monteiro had the following to say:

*“He'd written this book, the Transhumanist Wager [...] but who was he? Was he involved with humanity plus? No. Was he a scientist? No. Does he have some sort of unique scientific or technological angle to bring? Well, not really. And people were saying, well he can't do it. This guy can't advocate transhumanism because he doesn't have the relevant credentials [...] And of course he proved everyone wrong. He showed that that someone who was effective at communicating transhumanism could reach out to the mainstream media, [...] and he didn't need to bring the rest of the community along with him.”*

**Interview with Chris Monteiro. Fisherman's Wharf. San Francisco, CA. 12<sup>th</sup> August 2016.**

Here, Chris refers to Zoltan's outlier status within the transhumanist movement, and the recent mixed successes stemming from his apparent preferred lone wolf style of leadership, which have apparently caused controversy within the community. When I probed around this topic with other interview respondents, some suggested the apparent hostility and resentment from some first generation transhumanists – such as Natasha Vita-more in particular – towards Zoltan and the TPUSA is a symptom of a loss of control over transhumanism. Ironically then, given the entirely change-oriented premise of transhumanist philosophy – and indeed the anti-centralisation ethos held by many transhumanists – it would seem some are resistant to this recent political activist outgrowth of the original transhumanist philosophy.

Given the messy social and relational entanglements brought forth by politicising the transhumanist programme – and the strong ambient disaffection for political authority across THE advocates – perhaps also unsurprisingly, many respondents spoke at length challenging the idea that transhumanism should be viewed as a political project altogether. Much like the assumed value-neutrality to ‘pure’ Science, for some, there was a level of marked ambivalence surrounding whether transhumanism should be characterised as a political project. To address this topic,

during interviews I asked the direct question: ‘Is transhumanism political?’ I hoped this line of inquiry would prompt my respondents to account for the perceived costs and benefits related to the politicisation of the transhumanist project(s). Some respondents were quite explicitly sceptical toward the status of transhumanism as a political movement. On this point, Harvard-trained life-extension Lawyer Paul Spiegel had the following to say:

*“...we need the government to support what we're doing, and not to hinder what we're doing, but it's not the same thing as Republicans, Democrats, Tories, whatever you know... it's not a defined political movement, most of the transhumanists I know are much more concerned with the advancement of the human race and much less so with the acquisition of political influence or power.”*

**Interview with Paul Spiegel. Town & Country Resort, Fashion Valley San Diego, CA. 7<sup>th</sup> August 2016.**

In this respect, Paul appears to evoke a kind of apolitical transcendent quality to transhumanist-type striving, in which the supreme desire for Technological Human Enhancement should in some sense be understood to surpass the self-interested, power-focused excesses of ordinary political discourse. To be sure, this statement echoes claims made by other respondents who suggested projects seeking to radically advance humanity take on a kind of meta-level social or existential significance, and should, therefore, be granted a licence to pursue such ambitions without undue interference from government.

In Pauls view, the ideal model for transhumanism should be as a social movement comprised of self-organising collectives, rather than a political program organised by some centralised authority. To lend credence to this perspective, he referred to the numerous organisations centred around THE and THEA – including *Humanity Plus*, *Singularity University* and *People Unlimited* – which are mostly self-organising, yet overlapping in interest and ambitions. Through voluntary, networked exchanges Life-Extensionists from different organisations might freely seek to co-operate and collaborate in ways that ultimately contribute toward what Paul described as: "a greater understanding that human beings need not age and [...] die". Once again, this viewpoint upholds the idea that the vast and varied collection of de-centralised



THE advocate-groupings – currently, most obviously travelling under the loosely-organised banner of transhumanism – might somehow amount to something greater than the sum of their parts. Ideally, advocates hope with an ultimate net-effect of disseminating the message that technology not only can but should be leveraged according to rational human-agency to overcome the natural constraints imposed by biology and environment.

Irrespective of whether transhumanism ought to be best classified as a social, political, philosophical or technological movement, as with any marginal, reform-based enterprise it is pertinent to consider when the purpose of such forms of organisation has been served. On this point, further to the ‘cessation vs continuity’ area of questioning raised in the previous chapter, I also asked my respondents: “Will transhumanism always need a movement?”. I hoped this question would prompt my respondents to reflect on whether there might be key, determining goals the transhumanist movement was working to address, after which point it could be expected to become obsolete. Some believed the main purpose of the movement – to bring transhumanist ideas into the mainstream consciousness - had already been accomplished by early transhumanist organisations. Others were dubious as to whether there was ever any need for a public-facing activist contingent to transhumanism, suggesting instead the transhumanist movement's most important function was to network very talented people who might go on to solve technical problems, rather than provide advocacy for THE per say. Others maintained that for as long as scientific and technological innovation existed there would be a need for a transhumanist movement of sorts, to publically discuss the social, ethical and human-focused dimensions to emerging science and technology. Further still, perhaps the most telling response to this question came from Gennady and Wendy Stolyarov, who noted that a hypothetical future being with radically enhanced lifespan and intellect may well not be accurately described as human anymore. On this point, they mused that transhumanism “might sound quaintly xenophobic in a thousand years” time, and jokingly suggested the alternative coinages of *trans-status quo-ist* or indeed *transbeing-ist* could instead make for better generalisations of the transhumanist descriptor. Here the Stolyarovs playfully yet tellingly surmise that the most elemental feature of transhumanism is its fundamentally discontented or

transitory approach toward being itself, rather than any specific alliance toward – or indeed special attachment to – the present or future human outfit.

This section recalled the various forms of social and political activism envisaged by actors within the spaces found to be associated with THE and THEA, which included – but was not limited to – novel efforts at garnering forms of increasingly mainstream public awareness and potentially government-institutional influence through political party formation. That said, many respondents also appeared particularly sympathetic to decentralised forms of advocacy/activist organisation – especially which placed an onus on the individual – rather than rather than any which might assume a centralised, top-down format. Correspondingly, it is now relevant to explore how an affinity for the ideal of autonomy appeared common across many of the sites I attended – and as such might be taken as somehow integral component to transhumanism and THEA more broadly.

### 6.3 AUTONOMY: The Individuated Consumer as Self-Determining Agent

Consistent with THE advocates apparent preoccupation with long-standing European Enlightenment motifs and ideals presented previously, the distinctly modern western political notions of autonomy and self-direction emerged repeatedly over the course of both field observations and discussions with respondents on the politics of Human Enhancement over the study. This section examines how these two inter-related major tropes were often evoked to both justify and guide the various projects and organisations I found associated with THEA.

#### *'Proactionary' Self-Experimentation & Bodily Sovereignty*

Further to the Enlightenment ideals of scientific-empirical rationalism and progress, equally, the notion of autonomy – the state of being self-directed – was a powerful framing mechanism which actors across the sites associated with THEA used to position themselves in relation to the apparent possibilities of THE. In this sense, the idea of self-determination surfaced in various formats over the course of the study,

often in ways which also encompassed what can be described as a distinctly proactive orientation (More, 2005; Fuller and Lipinska, 2014) toward the advancement of scientific and technological knowledge and understanding. In line with the strong teleological-rational assumptions guiding the THE advocacy outlined previously, many of my respondents felt humans have the capacity to take rational control over their individual and collective destiny, and should feel compelled to take steps to perpetually advance human intelligence and systemic understandings to bend features of our environments to meet our will. Indeed, such a decidedly proactive attitude held by many advocates for THE I encountered is nicely captured in the following photograph of a T-shirt worn by Founder and CEO of *Open Brain-Computer-Interface* (BCI) Conor Russomanno taken on a dimly-lit Brooklyn, NY street corner:

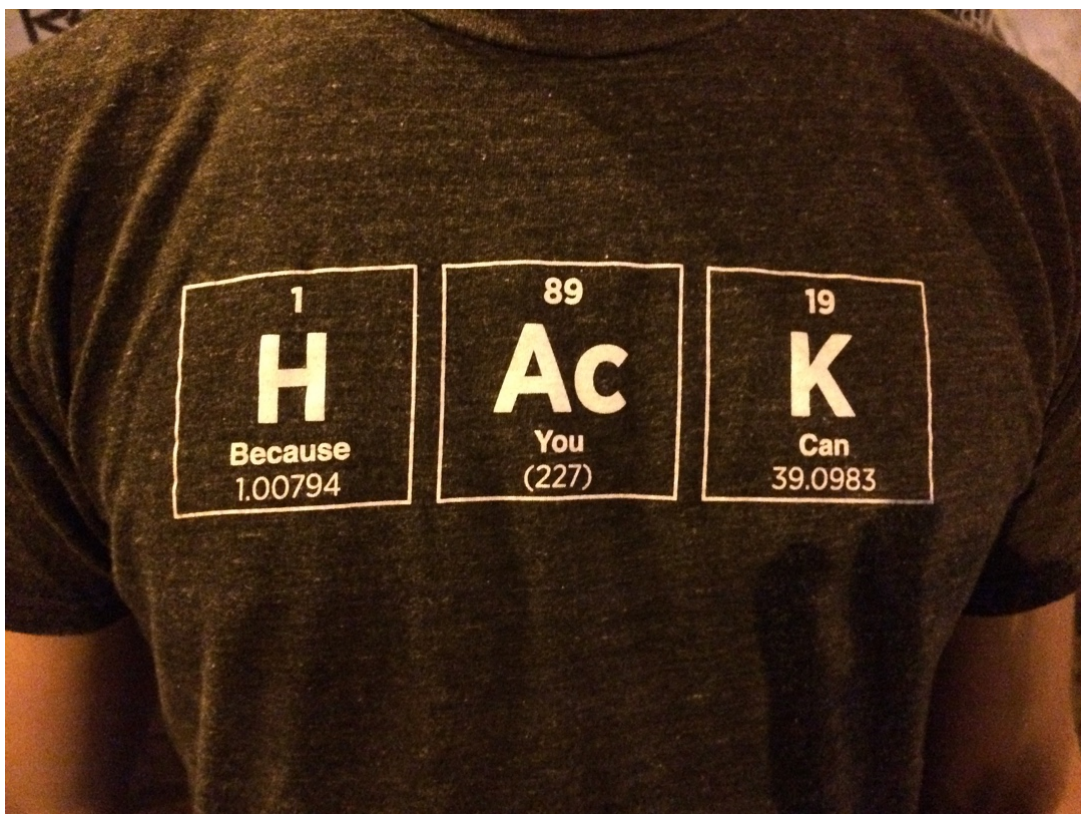


Figure 16: Open BCI's Conor Russomanno's

*'Hack: Because You Can'* T-Shirt. [Photo taken by Author. Brooklyn, NYC 2015]

The straight-forwardly power-wielding, hacktivist call-to-arms evoked by this shirt – which I learned was given out to participants in an *Angelhack* organised hackathon event – speaks to the self-directed proactionary, attitude which appeared highly

prevalent among many of the advocates of THEA I encountered. In this respect, other actors at certain THEA sites appeared to skillfully combine the individualistic, largely anti-authoritarian aspects of transhumanist philosophy and culture described above with the experimental 'tinkering' approach toward technological innovation. No doubt transhumanism-inspired highly technologized enactments of radical self-ownership and self-determination appeared well-represented on the UK biohacking scene. Among which not least then, was the garage science focused advocacy of Information Security researcher and Co-founder of London Biohackspace Andrew Vladimirov – who I met while he showcased his self-experimentation with transcranial Direct-Current Stimulation (tDCS) and Transcranial Magnetic Stimulation (TMS) devices at a live and interactive *Virtual Futures* Salon in London's Soho:



Figure 17: 'Neuro-stimulation' *Virtual Futures* Salon in Soho, London (February 2016) [Photo credit: Twitter @VirtualFutures]

In line with the format of the IBM Watson Virtual Futures private function which I'd attended earlier, the neurostimulation event held in February 2016 comprised of a panel discussion addressing various social, ethical and practical aspects of neuroscience and technology. During this discussion, Andrew stated he believed the overwhelming majority of existing institutional research in this space was focused on the provision of therapy rather than achieving enhancement. Related to this point, later the discussion moved toward regulation of the health-promoting claims associated with current neuro-stimulation products, and apparent attempts by manufacturers to side-step the labelling of commercially available neuro-devices – such as *Think* and *Focus* – as of medical devices under EU Law. Ultimately, Andrew appeared frustrated with what he described as geo-political constraints on his hobby. To be sure, beyond the state-based regulatory safeguards which restrict access to neuro-technologies, the difficulty Andrew mentioned securing funds for basic research in this area is also owing to the post-cold war political economy of science, which has increasingly moved the locus of scientific and technological funding from the public to the private sector. In conversation with me after a London Futurists meet-up, Andrew advocated for decreasing the current level of state-regulation of emerging technologies, which he felt was unnecessarily arresting the development of neuro-enhancement technology. Equally, elsewhere he has also previously raised the possibility of future governments abusing neuro-devices in ways which can to viewed as problematic, such as the potential application of tDCS during interrogation scenarios to reduce the human ability to lie (London Futurists, 2014). No doubt, Andrew then carried forward the autonomous self-led, experimental ethos of transhumanism in his amateur biohacking practices, using tDCS in the hope of generating experiential-technical insight into the workings of his brain, which he hoped would enable forms of future self-enhancement.



Figure 18: London Biohacker Andrew Vladimirov photographed by David Vintiner for *The Mind Issue* [Photo credit: Metro]

Other respondents appeared to share Andrews regulatory frustrations, with some going as far as to draw parity between transhumanist ideas and libertarian political philosophy explicitly. In no uncertain terms then, Respondent EW offered the following on bodily autonomy and transhumanism:

“I do strongly believe that this is my body and I should be allowed to do with it what I so choose. To some degree that feels like a deeper philosophical position than transhumanism, it certainly informs how I feel about it [...] Both libertarianism and transhumanism are caused by similar underlying ideologies I think.”

**Interview with Respondent ‘EW’. Conducted online via Skype. 14<sup>th</sup> September 2016.**

In a certain sense, EW's perspective presented here echoes his previous suggestion that transhumanist philosophy could well represent a subset of rationalism. That said, in this instance, he implies the notion of self-ownership could equally comprise what he describes as a deeper – or indeed more conceptually robust – philosophical-existential position than transhumanism. In any case, it's clear from this statement the respondent wished to effectively foreground his belief in self-determination, and assign a secondary significance to transhumanism. From this, we can infer the transhumanist philosophy might perhaps travel on the back of older, more well-established and accepted individualist tropes which have been long-standing features

of modern, western civilisations. On a somewhat similar note then, A.I. Researcher and Vice Chairman of Futurist non-profit *Humanity+* Ben Goertzel summarised the importance of personal freedom in transhumanist philosophy as follows:

“[...] the transhumanist movement doesn't have a central set of goals, but if I were to synthesise it myself it's to give human beings the freedom to modify and improve themselves in whatever way they wish, and then to foster the development of more and more advanced and interesting ways of improving ourselves.”

**Interview with Ben Goertzel. Town & Country Resort, Fashion Valley San Diego, CA. 7<sup>th</sup> August 2016.**

According to Ben, the goal of transhumanism is two-part: to uphold the personal freedom to self-modify with a view toward self-improvement, and to effectively bring about the social/structural conditions necessary to advance the depth and scope of present-day knowledge and understanding around THE. Sure enough, the practice of DIY transhumanism through hobbyist Biohacking practices – perhaps a technology-focused outgrowth of the extreme body modification (EBM) movement, using online spaces for open-source technological development – is a highly active field and one which effectively well captures both elements of Ben's stated dual purpose for transhumanism. No least then, the self-determining experimental impulse of biohacking is apparently being applied to increasingly biologically fine-grained and high-risk technologies recently, with news reports suggesting biohackers are now using CRISPR to make alterations to their DNA using cheap, easy gene-editing technology (Pearlman, 2017). As the critical commentary on the practice of biohacking from within the transhumanist movement has noted, with DIY enhancement, the goal is not strictly instrumental, but rather typically includes elements of exploration and self-expression (Sandberg, 2011). For this reason, it has been noted such activities can easily cross the line from well-reasoned, purposeful inquiry into morbid curiosity, opening biohackers up to personal harm owing to sub-professional testing environments, and poorly calculated risk-benefit analysis.

Equally, however, as I discovered, the new, radical and as-yet relatively poorly-understood and regulated state of biohacking can also cause it to apparently collide with broader cultural anxieties surrounding the uses and abuses of technology, as



reflected in my observations of some significant online spaces associated with the practice. At the extreme end of biohackers aversion to technical subordination to the control of others, in August 2016 Amal Graafstra – Founder of online biohacking equipment vendor *Dangerous Things* – wrote an open letter to those who believed they might have been implanted with electronics engaging in mind-control/mind-reading/tracking against their will. In this post, he refers to how Hollywood has created un-realistic cultural public perception as to the capabilities of chip implants, has combined with an emerging cottage-industry of scammers offering so-called removal services. These opportunists then apparently seek to capitalise on distorted public perception and corresponding anxieties surrounding the perceived threat to personal autonomy stemming from implantation technologies (Graafstra, 2016). By any reasonable analysis, this phenomenon combines poor technical-literacy with ambient cultural surveillance-paranoia to form a wave of new 21st century persecution-based psychological maladies which appear to follow a largely science-fiction inspired framework. As such, Graafstra's post can be seen as testimony to how the mostly unregulated state of subdermal self-implantation of electric devices outside medical necessity appears at tension with a simultaneous apparent deficit of public knowledge and understanding around the technical capabilities of implantation technology.

### *Free Markets, Free Choice*

Another distinct fashion in which freedom and autonomy appeared valorised over the course of my study was in the context of THEA concerning the consumer/market driven healthcare, a convention that I found especially noticeable across the USA-based field-locations I visited. In this respect, within the US-context, prospective THE-type interventions – those geared toward longevity in particular – tended to be framed as a matter of consumer choice, or sellable commodities within an increasingly crowded healthcare market. Indeed, nowhere did this feature more prominently than at Southern Californian RAAD Fest, where one of the founding sponsors for the event – along with *People Unlimited* – was the *Life Extension Foundation* (LEF) longevity focused nutritional supplement non-profit based in Hollywood, Florida. The LFE – founded in 1980 by Science Journalist Saul Kent

and his business partner Bill Faloon – has reportedly been previously subject to several armed raids by the FDA resulting in the seizure of property over concerns surrounding the sale of unlicensed medicines (Best, 2014). As mentioned in the description of RAAD Fest offered in the previous chapter, here discussions around THE appeared to occupy the altogether murky space between the presentation of early-stage prospective ‘breakthrough’ science alongside fringe and alternative medicine, all the while treated with a straightforwardly marketised prospective investor and consumer focus. At RAAD, purveyors of different elaborate enhancement-oriented modalities at varying stages of technical readiness – and no doubt, efficaciousness – competed for attendee's interest, and ultimately financial backing. In sum, this field site amounted to something of a giddy, ecstatic celebration of the potential for emerging technologies – notably, using the term technology as broadly construed as possible – to increase individual vitality and performance. In Southern California this was attempted with an emphasis on the infinite prolongation of life and health through strategic, consumption-based action.



Figure 19: Life Extension Health Supplements on Display at RAAD exhibition space [Photo taken by Author August 2017]

An unmistakably self-directed orientation toward health was continually re-enforced during numerous commercial presentations at the event, perhaps most neatly encapsulated in a presentation by Author Robin Farmanfarmaian, who recommended attendees become “CEO of their own health” in promoting her book *The Patient as CEO* (2015). In the context of the Southern-Californian direct-to-consumer marketing of the conference, this explicitly corporatist framing was intended to be understood as an empowering move, emphasising an assumed-capacity for individuals to enhance their health-span through the exercise of rational agency. Farmanfarmaian's book – dubbed ‘*How Technology Empowers the Healthcare Consumer*’ – suggests emerging consumer technology has the potential to furnish patients with the information and knowledge to make decisions which place themselves in a position of elevated control over their health and wellbeing.

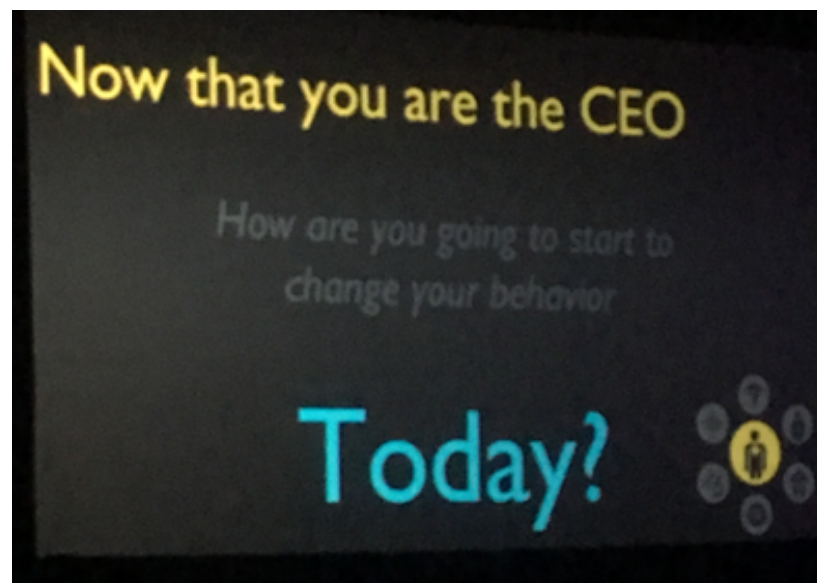


Figure 20: “Now that you are the CEO: How are you going to start to change your behaviour today?” presentation at RAAD [Photo taken by Author August 2017]

This individual-as-informed-healthcare-consumer orientation toward biomedical enhancement might paint a compelling picture, at least at the level of rhetoric. Of course, the lack of regulation endorsed by this approach can also be argued to make the would-be empowered healthcare consumer vulnerable to predation by companies who might deliberately misrepresent or overstate the scientific basis of their products. Sure enough, beyond the eclectic range of dietary supplements on display

at RAAD – what A.I. researcher Ben Goertzel termed *nutriceuticals* capturing the amalgamation of nutrient therapy and pharmaceuticals – many other modalities occupying the nebulous space between science and pseudoscience were showcased in the events commercially-oriented presentations and exhibition centre. This phenomenon is examined in more detail within the *Faith* section of the *Existence* chapter to follow. Gennady Stolyarov II – Chairman of the U.S. Transhumanist Party, of a Randite-Libertarian persuasion (Stolyarov II, 2012) – when questioned on the alternative health care options at the RAAD expo suggested that, in his view, the State should determine the safety, and the market should determine the efficacy of such products.

Once again, appearing at the apex between THE and what can be described as more conventional mainstream, accepted individualised healthcare products and practices, the notion of extreme self-preservation surfaced in particularly exceptional and elaborate terms during my observations at RAAD, with the presence of a life-insurance salesperson who specialised in brokerage of policies especially for funding Cryonics suspension: It appears this highly opportunistic approach toward selling of Cryonics – with the salesperson wandering the conference wearing a jacket embroidered with the text ‘May I Bid on Your Cryonics Life Insurance?’ – was intended to normalise the practice, attempting to place the suspension of the deceased in liquid nitrogen under the remit of *ordinary* life-insurance coverage.



Figure 21: Insurance Broker's Jacket asking: "*May I Bid on Your Cryonics Life Insurance?*" at RAAD [Photo taken by Author August 2017]

This attempt at domesticating cryonic suspension through situating the practice alongside conventional life-insurance products also closely mirrors the framing of cryonics offered by President and CEO of major US cryonics provider *Alcor* – and early contributor toward transhumanist philosophy – Max More, who suggested cryopreservation ought to be viewed as “an extension of Emergency Medicine”. In this sense, Max – who I met promoting it as a last-line of recourse at RAAD Fest – explained how the cryonics ‘patient’ could be suspended below freezing point for perpetuity while medical science advances to the point of developing a high-tech intervention of some kind to remedy their original cause of death. Despite attempts at casual-normalisation, complex legal considerations regarding the classification of death and handling of human remains (Madoff, 2010) have led *Alcor* into conflict with the state (Regis, 1991) and other high-profile public-ethical controversies surrounding the company's alleged practices (Johnson & Baldyga, 2009). As such, it appears advocacy for cryonics of the kind championed by *Alcor* represents an instantiation of highly speculative science and technology in a fashion which is both vehemently resistant to state-authority, and also unashamedly self-serving. As sci-fi writer David Brin recognises, cryonicists choose to dedicate a lifetime of

accumulated resources to themselves – rather than passing said resources over to their children. Ultimately then, purchasing an elaborate and costly burial with the slim possibility of retroactively extending life ultimately according to a measure of their personal wealth and self-interest (Brin, 2012).

Correspondingly, when I interviewed *Alcor* Research Fellow Hugh Hixon, and long-term cryonics advocate Keith Henson together at RAAD, they suggested the only real barrier standing in the way of access to the treatment was that of financing. Moreover, they both agreed the practice of Cryonic suspension appeared to disproportionately attract those of a Libertarian and Randite bent. On this point, Keith Henson had the following to say:

*“[...]most of the people who were involved with the early Extropian sort of stuff were Libertarian bent sorts of people. [...] Cryonics was a Libertarian hot-bed long before I got involved in it.”*

**Interview with Keith Henson and Hugh Hixon. Town & Country Resort,  
Fashion Valley San Diego, CA. 7<sup>th</sup> August 2016.**

When I asked them to comment on the history of state-opposition to *Alcor*, Keith told me the US government has run up against the Cryonics a couple of times and lost: "We have lawyers" clarified Hugh. They recalled how *Alcor* had upped and left California shortly after winning a court-case following the controversial Dora Kent suspension – where the *Alcor* team were accused of murder. This legal case occurred after a still-living patient was brought into the facility anticipating imminent *deanimation* (Perry, 1992) and later died, in the absence of a physician, under circumstances which the county coroner later deemed suspicious. They then told me *Alcor* had upped and moved to Scottsdale, Arizona, where in 2004, the state introduced a bill attempting to gain regulatory oversight of the cryonics industry (State of Arizona House of Representatives, 2004). After significant lobbying by *Alcor* and its members the legislation was eventually withdrawn (Alcor, 2004).

No doubt, the spate of controversies around the regulatory and ethical standing of cryo-preservation 'treatment' is illustrative of how cyronicists attempt to operate within existing legal frameworks – principally, those designed to protect the public

health from untreated or unburied corpses – as current-day State and Federal laws do not directly address the practice. In many ways, such discussions speak to the complexity of how core transhumanist ideas of radical self-ownership and self-determination apparently intersect with other more mainstream, established societal norms – indeed, those legally mandated – related to human dignity and the sanctity of the body after death. This section has provided an exploration of how the central trope of *Autonomy* – along with other allied values of selfdom – appeared to motivate and guide many of the projects associated with THEA, and also shaped the political outlook of many of those active within the spaces where the practice was found. On a certain level, unverified treatment-enthusiasts and cryonicists concerned with circumventing legal obstacles standing in the way of their pursuit of longevity are somewhat comparable to biohacker attempts to achieve enhanced intelligence using forms of risky self-experimentation which side-step institutional review boards. If nothing else, both share in their valorisation of technological use and application as an expression of personal freedom.

## CONCLUSIONS

The chapter has explored how perspectives on politics, what Ernst Kapp (1877) would call *internal colonisation* were conceived of across a range of THE advocates. Broadly speaking, the political accounts offered by respondents presented are consistent with descriptions of the intended mobilisations of THEA outlined in the previous chapter: wide-ranging and multi-faceted, yet drawing influence from certain emancipatory motifs and counter-establishment impulses apparently born from the European Enlightenment. A sizable cohort among both my interview and survey respondents reported strong dissatisfaction with existing or conventional structures of political governance. As such, they advocated for reform to governmental or inter-government institutional policy to better manage the emergence of technologies related to human enhancement. Advocates of an activist persuasion believed strategic party-political action might somehow bring about a more timely or equitable positive future shaped by THE. According to those sympathetic to the idea, recent attempts at political party formation represents an effort to bring a physical, embodied presence to the transhumanist movement, and



with it promote increasingly mainstream awareness of the ambitions of THE. That said, this party-type structure was not unanimously considered to be a positive direction for the movement to take, and many of my respondents mentioned having reservations toward transhumanists party-politics in their contemporary format. In this sense, a paradoxical reactionary conservatism toward politicisation of transhumanism appears to be expressed by some of its early THE proponents. Indeed, interview conversations on this topic revealed a recurring expressed preference for THEA to be carried forward not through a single monolithic party-political platform, but instead through voluntary interaction between decentralised, self-organising advocates and advocacy groupings. The affinity my respondents expressed for this format speaks to THE advocates' strong identification with the Enlightenment tropes of autonomy and self-determination. As such, many advocates positioned themselves as averse to backwards-looking prohibitive measures imposed by the state in attempting to control or contain the development and application of new technology.

This chapter has revealed the apparently antagonistic relationship between THEA and the political status-quo as evidenced by observations, interviews and surveys data collected over the course of the study. Specifically, these findings reveal how much of contemporary THE advocacy in the political sphere appears to consist of attempts to marry the old stabilizing structures of state, publics and democratic governance with new forms of emerging science and technology. Here, the party-political activist wing of the transhumanist movement hopes to help build the pro-science culture it takes as necessary for the future development and uptake of human enhancement modalities using what can be described as relatively typical political campaign and lobbying tactics. Advocates attempt to effectively normalise and domesticate the fringe technological-schemes associated with THE alongside more established, conventional programmes and practices of biomedical science and consumer medicine/healthcare – which today exist in a highly commercial environment – whilst also retaining a bold, forward-looking, maverick element seen as a key driver of technological and scientific progress. Transhumanism then, taking a cue from the humanism which preceded it, grants a sanctity to the individual to overcome any and all obstacles standing in the way of the full realisation of human flourishing. Albeit this is operationalised through a highly scientific-technologized

lens, including the use of technology to radically alter the human bodily constitution, and with it ultimately alter the course of our biological destiny. To be sure, it is apparent the motives and corresponding visions animated in equal measure by hopes and transcendent desires associated with both THE and THEA have a distinctly ideational quality at their core, which appears to overstretch the limits of rational human agency and begin to border on the ethereal at times. As such, further to the political (inter)relations conjured by the prospect of THE as articulated by respondents outlined here, at a deeper level, it is pertinent to explore the range of ontological and existential assumptions which might justifiably be taken to underpin the THEA worldview. The next chapter, *Existence*, examines these matters in detail.

# 7

## EXISTENCE

*“God is dead, but given the way of men, there may still be caves for thousands of years in which his shadow will be shown. And we-we still have to vanquish his shadow, too.”*

**-Friedrich Nietzsche *The Gay Science* (1882)**

Nietzsche recognised the profound super-structural significance of Christian belief in orienting the western collective mind, leading him to expect processes of secular disenchantment would violently shake the ideological scaffolds beneath human thought and action – though in his estimation, not irredeemably so. This chapter explores the various types of existential belief found to be held in tandem with advocacy for technological human enhancement across the range of sites visited. This chapter set out to address the following research question: *What kind of existential beliefs are associated with THEA?* As the previous analytic chapters have demonstrated, those THE advocates who I encountered over the duration of the study appeared to be driven by many different onto-normative assumptions. These apparently ranged from the transformative potential of rational agency, the teleological value to technological innovation, and ultimately to the place of humanity in the cosmos. As my review of the literature found, much existing work in this space has dealt with religious assessments of transhumanism, particularly academic scholars of religion's attempts at interpreting religious responses to transhumanists scenarios (i.e. Mercer and Trothen, 2015; Peters, 2011). By contrast, this chapter details the various assessments of religion offered by the transhumanists I encountered, as well as the range of ways existential claims and assumptions surfaced over the course of my field experience.

The chapter is broken into the following three sections, each reflecting the various existential orientations related to both THE or THEA which emerged over the course of the study. Firstly, it begins by providing an overview of how THEA relates to the doctrine of Atheism, detailing how secular scientific-reductive lines of reasoning were evoked by some advocates, apparently to distinguish and apparently lend

credibility to the transhumanist project. This section then raises the relationship between transhumanism and an apparent impulse to disavow forms of clerical authority, which appears to have become conflated with anti-theism in recent commentaries from within the movement (Istvan, 2013; 2017). Next, it proceeds to explore how, by contrast, other respondents also made some reference – either explicitly or indirectly – to distinctly Theistic motifs, examining the claim as to whether transhumanism itself might be classed as a quasi-religious movement. This section draws upon interviews with actors found to be actively involved with both theological and secular community-oriented efforts organised around THEA and uses their voices to explore the types of interpersonal and spiritual value which might be offered by such fledgling social formations.

Finally, the chapter moves to outline how the major enlightenment scientific-intellectual ideal of Rationalism versus its antagonist Faith was enacted across the range of sites associated with THE I attended, and indeed the extent to which these two contrasting cognitive approaches influenced the forms of advocacy I encountered. The chapter finds the former all-to-often spilled into the latter, with THEA apparently encompassing a far broader-based blurring of epistemic classification schemes in the 21st century, not least those conventionally evoked to distinguish between science vs non-science and expert vs laity, as well as information vs entertainment. Although the collapse of such absolutes in recent years will not come as a shock to many, it is worthwhile to notice, the hyper-modernist drive behind THEA appears – undoubtedly steeped in paradoxical irony – facilitated and emboldened by the onto-existential ambivalences of postmodernity.

## 7.1 ATHEISM: Closed-Individualism & Techno-Secular Humanism

Given humanism's strong association with secularisation (Fubini, 2003), and indeed proponents of transhumanism's self-announced ideological continuity with humanism – as detailed in previous chapters (More, 2013) – it is perhaps reasonable to expect high-levels of atheism to be found among present-day supporters of the transhumanist movement. However, my findings reveal a far more complex picture.

This section combines a set of noteworthy interview extracts around the subject of how transhumanism relates to atheism, and indeed also, in turn, the associated doctrine of individualism and secular-humanist philosophy. It suggests the trend toward disavowal of religion as raised in the recent activist literature (Istvan, 2013; 2017) should be seen in the context of an entirely more moderate disaffection toward clerical authority – emboldened via scientific scepticism and self-determination – rather than a total endorsement of non-theism by transhumanists per say.

### *‘Closed Individualism’ via Technologised Secular Humanism?*

As we have seen, present-day transhumanism appears predicated on a set of loosely defined enlightenment values, including the ontological and epistemic assumptions associated with the early modern period. Correspondingly, several those advocates who might be described as key figureheads active within the spaces related to transhumanism appeared keen to emphasise the movements proximity to both rational-empiricist epistemology – no doubt taken to have animated the scientific revolution – and secular values. In this respect, some high-profile self-avowed transhumanist-atheists I encountered included CEO of *Alcor* cryonics Max More, and US-Presidential Candidate Zoltan Istvan, although another noteworthy self-declared atheistic respondent who I spoke with at length on this subject was Independent Journalist and Transhumanist Community Organiser Hank Pellissier. This group of respondents were keen to emphasise the positive influence of atheism in fostering the right combination of intellectual/social/ethical conditions imagined as necessary for the full realisation of their human-enhancement centred ambitions.

Much of the canonical literature on transhumanist philosophy – written as transhumanism was starting to become increasingly formalised in the early 1990's – was the product of Max More, who claims he founded the movement on rationalist principles (More, 2009). Mores early writings in *extropy* magazine outlined a philosophy for transhumanism which explicitly positioned it as a superior *meaning-fostering* system which could effectively surpass the authoritative – and thus fundamentally constraining, or *entropic* – character of organised religion without falling into nihilism (More, 1990). Of course, precedent for this line of thinking –

namely, the rejection of Christianity in favour of a technologically embracing secular humanism – was carried forward by Julian Huxley, another proto-transhumanist type thinker, in his early twentieth-century text titled *Religion without Revelation* (1927). Indeed, in more recent years, a similar combination of anti-authoritarian, human-focused secularism appears to have continued to provide a core pillar in the self-conception of at least some of those who work to popularise transhumanism today. In this sense, during one interview a highly – if not resolutely – secular supporter of transhumanism, Zoltan Istvan, suggested in no uncertain terms, that those of an atheistic persuasion make for better transhumanists. Correspondingly, Zoltan has written on what he believes to be a significant overlap between the intellectual positions of atheism and transhumanism, making this viewpoint central to his US presidential campaign under the Transhumanist Party banner (Istvan, 2013; 2016c).

Sure enough, following this line of thinking, during our interview at RAAD Fest 2016, Zoltan told me he believed religiously-derived faith was fundamentally incompatible with transhumanism, which, by contrast, relies on the scientific method. That said, when prompted to describe the end-point of transhumanism, he also notably chose to evoke a quite explicitly theologically-derived motif, suggesting the goal for transhumanists was ultimately to "become god". Interestingly then, despite his hard-line rational-atheistic view-point, Zoltan also simultaneously maintained that the core ambition for transhumanists was to become all-powerful in a fashion closely approximating the omnipotence of a deity. To be sure, other commentators writing from within the transhumanist movement have worked to formalise the relationship between technological human enhancement and the concept of *playing god* – a dynamic Fuller and Lipinska call *Theomemesis* (2014: chp 2). No doubt, Zoltan's position then appears highly ambivalent here, given how his nominally scientific-rationalist outlook dovetails with other entirely more eclectic technology-centred interests, formed by direct analogy to religious cannon – namely the ambition to overcome mortal limitations and ascend to a position of ultimate power, at least in some conceptual sense. The apparently near mythical strength of resolve many THE advocates had for the power of science is examined more closely in the *Rationalism & Faith* section to follow.

Other interview respondents formed sophisticated, self-critical and introspective accounts of the potentially high-levels of atheistic representation apparent within communities associated with THE and THEA. For example, Andrés Gómez Emilsson suggested the preoccupation that some transhumanists, such as a Zoltan, have with Atheism is likely a consequence of the intense individualism associated with transhumanist philosophy. On this point, he told me:

*“...transhumanists, if they have a strong closed individualist perspective they tend to gravitate towards life extension. [...] so, I would say yes, the reason Zoltan disagrees so much with religion has to do with a very strong sense of self, a very strong closed individualists view, which is interesting because in itself it's a metaphysical view, you could even call it a religion as well. So, it's like one religion against another.”*

**Interview with Andrés Gómez Emilsson. Colma, CA. 14<sup>th</sup> August 2016.**

Here, Andrés suggests the atheistic mindset apparently held by some THE proponents equates to a kind of extreme exercise in self-determination, or hyper self-preservation, particularly when overlapping with desires to achieve super-longevity. Sure enough, such appeals to radical self-preservation were reflected in my field-observations, not least in comments made by one speaker. When asked during an audience Q&A about the prospective merits of blood-banking at RAAD Fest 2016, they stated the practice of giving blood was most likely an aging accelerant, and – contrary to notions of altruistic banking – suggested longevity devoted attendees might wish to instead privately cryopreserve their own blood, and donate it back to themselves later in life. No doubt, this correlation of the pursuit of super-longevity with abnormally high levels of self-interest – as neatly embodied by the speaker in the above example – also echoes other reports of an ambient extreme self-centredness surrounding tech-culture (Borsook, 2001). For Andrés, transhumanists strong affinity for the trope of autonomous self-direction might also then disproportionately predispose them to anti-theistic – or at least anti-clerical authority – worldviews. Moreover, in the previous extract, Andrés also suggests the level of conviction many transhumanists have toward the somehow innate sovereign power of the individual to extend the course of their life for perpetuity could be seen to

constitute a quasi-religiosity itself. This notion is examined in detail over the course of the *Theism* section to follow.

### *Non-Dogmatism = Better Transhumanism?*

Respondents of an atheistic persuasion who I encountered emphasised transhumanism's drive to diverge from – ultimately, to surpass – traditional renderings of the human, especially those bound up with notions of sanctity to the body, alongside relatively fixed normative expectations surrounding human birth, life and death. Correspondingly, atheism gives transhumanists a way to effectively circumvent the strong onto-existential baggage imposed by adherence to religious doctrine, ultimately in the service of breaking humanity free from the limitations imposed by ideologies of the past. Paradoxically though, when taken to excess, a principally reductive, scientific-materialist orientation toward THEA – as first formulated by Max More, and more recently championed by Zoltan Istvan – could itself be seen to represent a sizable cognitive bias which might severely limit or distort transhumanist thought. On this point, Andrés also attempted to account for the apparently high-prevalence of atheism on the transhumanist scene in more precise technical terms by drawing upon the theory of mind:

*“It arguably has to do with impairments in the theory of mind, and having a hard time modelling other people..., to some extent, when people experience God or higher levels of consciousness, there's a lot of entity modelling. So, if you don't have that degree of freedom in your consciousness, religion is not really rewarding or interesting.”*

**Interview with Andrés Gómez Emilsson. Colma, CA. 14<sup>th</sup> August 2016.**

In this extract, Andrés offers a detailed response, no doubt informed by the respondent's high-level academic-professional background in AI, Cognitive Science and Computational Psychology at Stanford. As such, the excerpt captures what can be described as a neuro-cognitively based rationale for the social constitution of the transhumanist movement. Such a scientised (Hayek, 1952; Sorell, 1991) justification for the variances of human behaviour associated with THEA parallels the use of the



emphasising versus systematising theory (Baron-Cohen, 2002) which other respondents cited to account for the prevalence of males within THEA groups.

To be sure, during conversations on this point, I was struck by how several respondents offered highly technical explanations for transhumanist positions on atheism – discussing at length how their perspectives on the existence or non-existence of a deity sat within the broader ideological composition of the transhumanist movement, apparently attempting to think objectively toward the matter, and outside of their value-system. Despite the small minority who took atheism to be synonymous with transhumanism – perhaps, as Andrés suggested, because a shared strong self-orientation – many those who I spoke with held more nuanced views on the existence of god. Simply put, for most respondents' absence of proof for god's existence was recognised as not tantamount to proof of absence. As such, most transhumanists I encountered would more accurately be classed as agnostic – a perspective which, although while typically disavowing clerical authority, stops short of issuing any absolute metaphysical claims as to god's existence or non-existence. Ultimately then, those who did not believe atheism was a necessary precondition for transhumanism suggested, in what can surely be more moderate terms, not being dogmatically bound to religious tradition would likely make for a better transhumanist.

In this respect, it is clear many THE advocates assigned a high value to independent freethought in the place of dogmatic adherence to religious authority and renounced the notion of an activist god. Furthermore, in addition to questioning religious doctrine, several respondents suggested transhumanists should also be chiefly oriented toward the observable, material world. On this point, Gennady Stolyarov offered the following:

*“...I don't think a transhumanist is required in any sense to become an atheist, but I do think a transhumanist needs to focus to a certain degree on this world, and on improving human life in this world, and if that happens to coincide with a religious teaching or a religious mission I don't have a problem with it...”*

**Interview with Gennady and Wendy Stolyarov. Town & Country Resort,  
Fashion Valley San Diego, CA. 6<sup>th</sup> August 2016.**

In this sense, both the Stolyarov's agreed that scepticism and purposeful questioning was integral to the transhumanist outlook – while also emphasising what they considered to be a culture of tolerance and accommodating plurality present across transhumanist communities. Sure enough, in a quite straight-forward sense, this perspective is consistent with the sceptical-rationalist principles which some have conventionally associated with enlightenment humanism (Solzhenitsyn, 1978; More, 2013). Similarly, Harvard-trained Lawyer Paul Spiegel told me transhumanists and atheists were unified by a shared search for reason and understanding:

*“We tend to look for reasons, we tend to look for reality, we tend to look for understanding. On the other hand, I go to the jungle and I drink Ayahuasca [...] Am I an atheist? No. Am I an agnostic? Probably. I think there is something out there that is bigger than we understand, and I don't know how to accommodate that with my firm conviction that mankind will be able to upload his consciousness into a non-biological substrate in say the next 30 years.”*

**Interview with Paul Spiegel. Town & Country Resort, Fashion Valley San Diego, CA. 7<sup>th</sup> August 2016.**

Here, Paul raises the uncertainty surrounding his position on god, as well as the paradoxical nature of his support for science, reason and understanding alongside his own experiences involving Ayahuasca – a traditional spiritual medicine. Sure enough, other respondents and sites I visited returned similar ambivalences between the action-orienting capacity for reason versus the challenges of carrying such ideal through in practice. As such, this subject is examined in greater detail within the *Rationalism & Faith* section to follow.

Another recurring theme which arose over the course of my interviews was the idea that transhumanism could contribute toward somehow resolving the deficit of Western values left in the wake of the *death of god* (Tuncel, 2015). Specifically, transhumanism was suggested to provide atheism with a purposive, forward-moving, directional quality which it could be otherwise lacking. Indeed, one respondent from the San Francisco rationalist community reported being completely disinterested in

those who organised their identities around atheism, because of shallow depth and scope of their argumentation and philosophy:

*“So, the problem with atheism, if that's your primary identity, which it is for some people [...] They're entirely defining themselves by something that they're not. [...] The only thing they want to do is sit around and talk about how stupid people are to still believe in religion [...] ... I'm so done having that conversation... [...] For people where atheism is their primary identity, they have to talk about it. [...] So alright, fine, they can go and talk about that somewhere else. I'm not particularly interested in that crowd.”*

**Interview with Respondent ‘EW’. Conducted online via Skype. 14<sup>th</sup> September 2016.**

Here, the respondent raised the notion of atheism providing a relatively limited form of self-identity, as the atheistic world-view is typically expressed by proponents solely in the negative. Interestingly, by way of resolve, Zoltan Istvan offered the following when I asked him to comment on the relationship between atheism and transhumanism:

*“I think atheism is going to morph into transhumanism, I'm sure of it... because atheism **is** just this lack of god, it's not a real movement, it's just like a belief system... whereas transhumanism gives atheism its teeth, finally the atheists have some substance to it, a lifestyle they can pursue that includes everything from economics to philosophy to ideology...”*

**Interview with Zoltan Istvan. Town & Country Resort, Fashion Valley San Diego, CA. 6<sup>th</sup> August 2016.**

In the above extract, Zoltan suggested transhumanism provides more or less precisely what respondent EW felt was missing, a kind of concrete, actionable framework for the atheistic world-view – or what Simon Young (2005) calls a totalised philosophical system. He went on to add he'd done his best to reach out to this demographic – including writing for the *Richard Dawkins Foundation* (Istvan, 2016a) – to "convince atheists to come onto [his] side" which he accepted had been

challenging. He suggested overall, they'd been receptive, and that he believed was making progress in recruiting new transhumanists from the atheist community.

In effect then, given transhumanism's apparent grand ambitions to somehow definitively resolve human suffering and limitation using the lens of science and technology, the movement could perhaps offer atheists the kind of all-encompassing, highly compelling philosophical narrative – perhaps then fulfilling an innate human need that those of a strongly atheistic disposition aren't able to otherwise satiate via religion (Smith, 2007; 2012). Through this lens, transhumanism can be viewed as a new and exciting, nominally secular meaning fostering idea-system among the otherwise existentially dispossessed – delivering a coherent and historically enduring world-view, the likes of which could prove especially popular among those attracted to the counter-cultural, contrarian social-standing of the movement. In this respect, recent transhumanist activists self-declared parity with atheism – or scientific materialism more generally, exemplified by Zoltan's campaign – perhaps represent a branding exercise designed to flatter the egoistic self-conception of prospective THE supporters, while lending scientific credibility to THEA, and thus enhancing the legitimacy or viability to transhumanist political policies.

This section has recalled the suggested rationale underlying the supposed importance of the atheist onto-metaphysical position as reported by respondents during interviews. Equally, it also raised the more moderate perspectives on this matter offered by some respondents, several of whom instead merely suggested strict adherence to religious tradition could be somewhat problematic for THE advocates. In this respect, they emphasised how strict adherence to religious doctrine appeared at odds with the high value assigned to freethought, sceptical questioning and objective materialism by transhumanists. On balance, it appears the hard-line atheistic stand within transhumanism has emphasized how concern for objective truth is apparently shared between two outlooks, and in so-doing has attempted to create a kind of new social movement centred around the scientific method. That said, other respondents emphasised the levels of religious tolerance within the communities associated with THEA. Moreover, some went as far as to defend more elaborate forms of personal interest which might go beyond those which can be rationally justified. Building on the above suggestions that elements of religiosity or

quasi-religiosity can be found in the spaces comprising THEA, it is now relevant to consider how the inverse notion of theism surfaced during the study.

## 7.2 THEISM: The Technology of Post-Secular Community

It is apparent counter-authoritative atheism features prominently in early transhumanist philosophy (More, 1990), and more recently has been a central component to USA-based transhumanist political mobilisation under Zoltan Istvan (Istvan, 2013; 2016c). That said, other contrasting theistic THE-centred groups – such as the *Mormon Transhumanist Association* (Hyena, 2010; Goertzel; 2011; Cannon, 2015) – maintain that transhumanism is not at all inherently atheistic. Despite the atheistic position advocated by some particularly vocal activists within the transhumanist movement – informed by the rational-empiricist epistemology of the Scientific Revolution, combined with an apparently European Enlightenment-inspired aversion to clerical authority – there were others who I met that felt theism and THEA were entirely compatible or even complimentary existential orientations. Further to the multiple ambivalences shown by respondents toward scientific realism outlined previously, this section now recalls some cases where distinctly theistic topics or themes were evoked across the sites and discourses around technological human enhancement advocacy encountered, emphasising the significant influence theistic modes of thinking had upon the performance of THE.

The first subsection formalises the idea that transhumanism, or indeed THE-based advocacy more generally, could itself be characterised as a kind of quasi-religious movement: In this sense, it outlines the extent to which forms of THEA were seen to contain underlying theistic elements, and be overtly promoted through organised religious institutions. Further then, the second subsection proceeds to examine how the group-centred efforts at Technological Human Enhancement Advocacy I encountered were found to provide a significant source of social-cohesion for those involved. In this respect, it recalls how some respondents spoke at length of the strong social-bonds which had been formed across select sites associated with THE,

and considers how this integration under THEA could be viewed as particularly novel forms of post-secular Pilgrim Atheist communities (Hashemi, 2017).

### *Transhumanism as a Quasi-Religious Movement?*

Undoubtedly, as other critical commentators have noted, there appears to be a significant apparent over-lap between religious ideology and transhumanism (Smith, 2007; Smith, 2010; Singler, 2017). Prior literature in this space has indicated that this connection is somehow tied to the existential relief provided by a highly scientised (Sorell, 1991), materialist-reductionist worldview: For example, former evangelical Christian Meghan O'Gieblyn has described first-hand how she became immersed in transhumanist literature and philosophy an attempt to remedy her despair at the absence of God (O'Gieblyn, 2017). In their most extreme, unrestrained and fantastical claims around potential future applications of THE, some advocates I encountered appeared – knowingly or not – engaged in efforts to apparently spread the ‘good news’ of Science-based thought and action as means to deliver a kind of secular version of divine providence (Fuller, 2010).

As noted in the previous section, over the course of my interviews many respondents were prompted to reflect deeply upon how bold, and determined transhumanist advocacy for human technological-enhancement can, at times, begin to bear a striking resemblance to the salvation-focused evangelism found in Christianity. Indeed, far from dismissing this tacit association between the seemingly infinite promise of THE and ideas around theological revelation, many of those I spoke with appeared highly aware of the significant conceptual over-lap between transhumanism and theistically-based motifs drawn from the Abrahamic canon (Fuller and Lipinska, 2015; Thiel, 2015). For example, interview respondent EW explicitly raised the parity between transhumanism and sublimated Judaeo-Christian themes – and the potentially unifying capacity of transhumanist-futurist thought:

*“[...] is transhumanism a thing you can unite around? Yeah, I mean Futurism in general has the right elements to tie together. We have the notion of the singularity, which closely ties to the notion of the rapture. We have artificial intelligence which*

*is God, we have Cryonics which is the possibility of the afterlife... we have uploading which is like transcending our body after death, [...] There's also the simulation hypothesis, that plays into this in some weird ways too.”*

**Interview with Respondent ‘EW’. Conducted online via Skype. 14<sup>th</sup> September 2016.**

Clearly, in this statement, the respondent draws quite explicit parallels between central transhumanists concepts and long-standing ideas stemming from the Abrahamic faiths. All things considered then, it would appear there is reasonable indication that many proponents of transhumanism displayed an understanding of – and even suggested potentially deriving benefit from – both tacit and overt theistic themes within their schemes of activity. To be sure, in more straightforwardly overt terms, some self-styled new religious organisations have been spawned following the rising popularity of transhumanism and THEA in recent years. For instance, *The Church of Perpetual Life* (CPPL) – founded in 2014, notably with funding and leadership from *Life Extension Foundation's* CEO Bill Faloon – is one such example, based in Hollywood Florida. Given the strong association between Faloon and the CPPL, representatives from the organisation attended both RAAD Fests, and in 2017 promoted the organisation using a stall in the exhibition space photographed:



Figure 22: The Church of Perpetual Life at RAAD Fest Expo [Photo taken by Author August 2017].

Positioned alongside the sleek, polished branding of the other THE-oriented commercial ventures within RAAD's exhibition space, the CPPL stall carried a raw, home-grown aesthetic, with their logo, signage and promotional material apparently comprised of late 1990's *Microsoft WordArt* text married to sci-fi stock imagery. I took this opportunity to interview the church's officiator Neal VanDeRee – a real estate auctioneer by day – around his recent involvement with the fledgling religious institution, and the subject of THE more generally. When I invited Neal to give an overview of the church, he offered the following:

*“We have services once a month where we get together and have meetings, we have speakers speaking on the topics of age-reversal, cryonics and artificial intelligence and things which relate to transhumanist thought. Our particular focus is really on trying to lengthen healthy life spans to an unlimited potential [...] since it’s a transhumanist church, it’s a science-based church... there’s a faith-based component, where we have faith in human technologies of reversing aging and defeating death.”*

**Interview with Neal VanDeRee. Town & Country Resort, Fashion Valley San Diego, CA. 12<sup>th</sup> August 2017.**

In Neal's opinion, the organisation – which he told me was, at least to his knowledge, the only bricks and mortar transhumanist church in the world – provided an important social function for those involved. Speaking on the community aspect of the CPPL, he suggested:

*“Perpetual life allows myself, and other members of the church who wish to have an unlimited lifespan meet with others who feel the same way, think the same way and are living the same way [...] and so we can get together and have meaningful conversations and presentations by people who wish this. We can get together and form a community, it’s more than a club... it’s really forming our own family of other immortalists, if you will...”*

**Interview with Neal VanDeRee. Town & Country Resort, Fashion Valley San Diego, CA. 12<sup>th</sup> August 2017.**



I asked whether there would ever be a point in the future where the role of the church would become obsolete – say, for instance, once the values championed by the organisation had been subsumed by mainstream culture. In response, he explained he felt there would always be a desire for people to come together, given that he understood that human beings were typically social creatures. To help illustrate his point, Neal offered me some of his general observations surrounding the development of technology and science over the course of human history. Specifically, he told me he accepted it was beyond the scope of our ability to predict our conditions of life in hundreds or thousands of years' time. Nevertheless, he maintained that throughout history there had been a small number of what he called “prophets of the future” who had been able to anticipate what the future would be like. Indeed, he maintained there were many such persons presenting their compelling visions at RAAD. While he felt the future development of science and technology would ultimately continue to be animated by lone visionaries, Neal reasoned there would also always be a corresponding need for people to come together in groups to discuss the implications of these innovations. Accordingly, he suggested that possibly the most important role of CPPL was to provide a physical space for people to assemble and have such conversations in person, given how people today tended to do much – if not all – of their social interaction online, through social media platforms like *Facebook*. Given Neal's description of the shared values among members which serve as the basis for apparently intimate social relationships, the CPPL can be seen to contain elements befitting of a community of interest (Hoggett, 1997).

For Neal, community-based groups organised around THEA such as the CPPL – alongside other comparable organisations, like *People Unlimited* – were ultimately efforts at bringing life-affirming people of all different religious and non-religious belief-systems together – and with it forming new “families” of sorts according to shared ambition for immortality. According to their new-member survey, around 2/3rds of the CPPL's congregation was comprised of 2/3rds had some theistic orientation – with its gospel-derived from Russian Orthodox Christian and Cosmist Nikolai Fyodorovich Fyodorov (Kowell, 2013) – but others identified as atheist or agnostic. He then told me in no uncertain terms, and surely without a drop of irony, how, much in the way that religions had conventionally worked to offer their

followers consolation over death, for the first time in history humanity now has a real chance of reversing ageing and achieving unlimited life-span. Given Neal's conviction on this point, it is tempting to assume the church's founders and leadership is comprised of *true believers* (Hoffler, 2002) in Fyodorov's cosmic prophecies. Yet from an altogether more sceptical perspective – and indeed, certainly departing from this suggestion of a primarily edifying community-social function – CPPL has been suggested to represent an elaborate tax-dodge for Faloon's *Life Extension* company, using the US 501c3 protections and exemption from financial disclosure reserved for non-profit religious organizations (Motherboard, 2016).

### *THEA as Basis for Secular 'Community of Interest/Value(s)?*

To be sure, through my field observations and interviews a recurring theme which became apparent was the apparently high-level of social bonding between advocates across some of the advocate groups organised around THE. On balance, the intensity of this social bonding appeared most pronounced among the US-based groups I encountered, particularly those found on the West-Coast. Among those actors who I interviewed in this space was Joe Bardin – one of the main host-presenters at RAAD Fest, and Director of Communications for *People Unlimited* (PU) – we spoke about how immortalist communities might offer their members a powerful shared sense of purpose and belonging. In the interests of clarity, at outset of this conversation, which occurred at RAAD 2017, I asked Joe to formalise the distinction between *People Unlimited* (which he told me was a business, the mission for which is to provide “Inspiration, education and connection for people who are passionate about unlimited life-spans”) versus the *Coalition for Radical Life Extension* (which he described as instead, “a broad-based, non-profit organisation for building community around, and promoting public support for, radical life extension”). Joe explained the latter was a more recent offshoot of the former – choosing to characterise PU as essentially a for-profit education-community – with the unification of people who were “*questioning the mortality paradigm*” the goal apparently shared between both enterprises.

Further to this point, Joe spoke about how the organisation had brought together a group of social outcasts who felt like they didn't belong elsewhere:

*“...these people tend to be loners. We’ve felt like weirdos, we’ve felt like outliers... but the problem with that is that it’s very hard to accomplish anything without coming together, so that’s what we’re trying to do”*

**Interview with Joe Bardin. Town & Country Resort, Fashion Valley San Diego, CA. 13<sup>th</sup> August 2017.**

Despite the self-described outlier status of those who constituted *People Unlimited*, Joe told me unlimited life-spans should be for everyone, and that the organisers of RAAD Fest had deliberately designed the event in an attempt engage wider publics – i.e. beyond specialist scientists and technologists – in the discussion around age-reveal and physical immortality. When prompted to speak on the value to social movements within the THE space, here, Joe echoed Neal VanDeRee's suggestion that human beings were highly social creatures who needed meaningful interactions with one another. Our conversation then moved to consider the attitudes, values and motives and which might be seen to influence a person to actively involve themselves in THE advocacy. He then told me, speaking in his capacity as Director of Communications for *People Unlimited*, he hadn't been able to identify the factor(s) which attracted people towards THEA, other than, again, this so-called questioning of the mortality paradigm. When prompted, Joe agreed those THE advocates he'd encountered typically shared what at first glance might resemble countercultural impulses, yet he maintained PU and the coalition were seeking to go beyond the social-movement type activism of the 1960's, and instead form a *next* culture of sorts.

In addition to acting as one of the charismatic lead presenters at both RAAD Fests, at the 2017 event Joe also delivered a presentation titled *Community: The Underutilized Technology*. In this talk, he spoke of the high value to community in helping foster both passion and belief – and with it then potentially working to achieve tremendous feats on both an individual and collective basis. Here, Joe suggested the technology of community works to create the culture of accountability and support required to make the personal transformations of the kind necessary for immortality. He

lamented on how “the community of ageing and death” represented perhaps the biggest community of all, and indeed, how given the widespread prevalence of *deathist* views across mainstream society, he recognised the strong temptation to withdraw into a figurative “immortality bunker”. As such, in line with *People Unlimited's* highly polarised perspective on longevity, Joe suggested the only way to opt *out* of the community of ageing and death is to opt *in* to the community of living without limitation and, with it, purging oneself of the *toxicity* of death-oriented living. No doubt, these unusual descriptions of retreat, isolation and purging might be viewed as testimony to what others have described as a highly insular, cult-like quality to PU (Van Velzer, 2014).

In short, Joes overarching wish was for the community of immortalists assembled at RAAD to grow and share resources, not just concerning disseminating information around emerging technologies, nutrition and exercise, but also striving to support each other on an emotional level, regarding say: "dealing with family situations". Joe's rhetoric-laden speech encouraged the audience to connect over the ‘what’ (i.e. achieving unlimited lifespan) and the ‘why’ (i.e. because death is wrong), but to remain relaxed on the ‘how’ – since there are a lot of differing opinions on the science of anti-aging/age-reversal, and whilst it's good to *debate*, it's not good to *separate*. Joe suggested the technology of community is the enabler of all other technologies. Ultimately then, he advised attendees to come to RAAD fest every year, but also to join an organisation like *People Unlimited* or the CPPL and connect – either in person or online – with people who share a passion for overcoming death. This, he hoped, would allow the movement to gain the public acceptance and support needed to realise its ambitions – referring by analogy to the massive strides forward in how society views homosexuality over the previous decades, which he suggested should be how immortalists would come to be viewed in the future.

Heavy rhetoric aside, Joe's primary line of argumentation echoed Neal VanDeRee's, namely that offline social activity and strong emotional-interpersonal bonding ought to be a major component of THEA strategy. Indeed, similar comparable appeals to the high-value of real-world interactions were offered by other respondents involved in THEA community development. For instance, self-described Transhumanist Community Organiser Hank Pellissier had the following to say surrounding his

efforts – which had been largely San Francisco based – at bringing the transhumanist community together:

*“I was trying to make transhumanism fun [...] we would have meme contests, we would have poetry contests... at some point after ten conferences I realised conferences aren't that fun [...] we're going to take transhumanists into the woods and we're going to cook marshmallows. I think that kind of stuff has value, honestly. Aren't the groups that work the ones where everybody is really good friends? [...] I don't know if transhumanism has become that at all, but to me it seemed like it should, or it could....”*

**Interview with Hank Pellissier. Piedmont Café, Oakland, CA. 16<sup>th</sup> August 2016.**

Here, Hank again – like Neal and Joe – raises the importance of some subtle aspects which could be justifiably taken to comprise the human experience: friendship and group belonging. In this sense, such a focus on the potential for transhumanism to coalesce into a real-world community of shared values appears to depart from the otherwise abstract, disembodied, and principally technology-centred ambitions described in transhumanist programmatic literature, say as exemplified by the *Transhumanist Declaration* (Humanity Plus, 2009).

At their most extreme, such calls to increase interpersonal closeness combined with the fringe, ideational and quasi-religious standing of THE, prompt allegations of cult-like character to THEA, as the commentary on the more devotional variants I encountered has shown (Van Velzer, 2014). Again, this was not missed by self-critical proponents of THE I spoke with. Scott Jackisch – of the East Bay Futurists Meet-up group – offered the following:

*“We say we're atheist, but we've joined this cult and now we're going to live forever, not by eating and drinking the blood of Christ, but of eating and drinking this nanotechnology or something... right? I think we should be careful of that. When we're atheists we should be aware when we're engaging in this wishful thinking basically, and this fear of death. We should listen carefully to these critiques that this can look like a cult, we should ask ourselves that question [...] Am I just afraid of death, is that why I'm seeking these things?”*

**Interview with Scott Jackisch, Trestle Glen, Oakland, CA. 15<sup>th</sup> August 2016.**

Scott's reflexive self-awareness here testifies to how the transhumanist cannon has theological themes, and indeed the extent to which some THE advocates have embraced this overlap, taking it as a basis for new mystical communities organised around THEA which have emerged in recent years – clearly blurring conventional lines between atheism and religion. While this phenomenon is perhaps most obviously captured in *The Church of Perpetual Life*, the prospective emotional-social benefits to THEA group membership was also actively promoted by *People Unlimited* – and indeed, albeit to a lesser extent those, such as Hank, involved in organising futurist-oriented community meet-up groups more generally. Those who I interviewed from such organisations, particularly those which have a brick and mortar presence, were keen to emphasise the value to be derived from physically embodied community participation. That said, in the case of both the CPPL and *People Unlimited* such community forms could well be driven, at least in part, by economic interests.

It would seem offline transhumanism – and equally other psychically embodied, community-focused variants of THEA which seek to technologically address perceived inadequacies surrounding the current course of human life – can apparently offer a powerfully binding social-alliance for those involved. No doubt, this pooling of shared, life-affirming values – not least, a wish to face the thorny questions of human limitation, and with it ultimately offer some form of consolation over death – is precisely the kind which would have conventionally been the purview of religious institutions. From this perspective, transhumanism surely resembles a type of secularised new-age religious movement (Peters, 2014), mostly comprised of self-styled scientific-rationalists (i.e Istvan, 2013). In this respect, some transhumanists – those who maintain a foothold in the atheist camp, whilst also simultaneously pursuing elaborate technological schemes, which mirror the drive to ascend to a position of ultimate knowledge and power, not unlike the point of apotheosis found in theology – can be seen as what Hashemi (2017) calls *Pilgrim Atheists*. This term he uses to captures those who disavow gods existence only to devote themselves to finding other definitive meaning-finding systems elsewhere, such as through the practice of science. These findings illustrate how the principally

loose possibility of THE can be effectively utilised by THEA groups as the basis for a kind of secular, faith-based community of anticipation, or expectation. As such, the future-facing orientation underlying these groupings, which emphasize speculative potential, can be seen to conflate transhumanists nominally rational-empiricist epistemology (More, 2009), with other more ethereal, faith-based schemes of justification. The complex interplay between rationalism – which transhumanist literature maintains is a core driver of technological transformation - and faith is deserving of further attention.

### 7.3 RATIONALISM & FAITH:

#### The Seduction of Promise in Lieu of Certainty

In accordance with the supreme importance THE activists ascribe to the scientific method (Marcen, 2011), the self-representation of groups and organisations formed around THEA tended to place considerable stress on the cognitive ideal of Rationalism – and the primacy of empiricist epistemology – in what I have suggested might, at least at a surface level, resemble an effort to lend legitimacy to the cause(s) associated with THE. That said, as alluded to in the prior sections, upon closer examination I found the relationship between the cognitive ideal of rationality and the actual projects associated with THEA to be far more complicated than this simple framing would suggest. This section examines tensions between rationalism and its antonym faith as they appeared in the field.

*The Unknown vs Unknowable: Dovetailing with The Fringe & Esoteric*



Figure 23: ‘*Theraphi*’ device demonstrated at RAAD Fest Expo [Photo taken by Author August 2017].

Given the affinity between THEA and contrarian, countercultural thinking outlined in previous chapters, and the broadly-construed definition of technology typically used by THE advocates, the emerging technologies I found associated with THE ran the gamut from those apparently carrying an air of credible technical-corporate legitimacy – such as IBM *Watson's* personified application of A.I. – versus others, which appeared to exist within an entirely more fringe and esoteric space, apparently standing quite defiantly outside the mainstream, accepted canons of scientific and technological legitimation. As a clear example the latter, the RAAD Fest sponsors exhibition featured a range of what would be best described as alternative health care modalities, including the *Theraphi* device pictured above, which I learnt, from its highly enthusiastic and animated representative, was based on principles of Sacred Geometry. By any reasonable estimation, this highly elaborate, some would say fanciful device – currently retailing at 26,000 USD – purports to operate defiantly outside the standard parameters of observable effect and efficacy set by contemporary medical orthodoxy. No doubt, it also appeared to complement the free-thinking, anti-authoritarian sentiment apparently held by a significant portion of the conference attendees. On this point, at the previous year's RAAD Fest a



presentation put forward by celebrity guest speaker Suzanne Sommers roused these feelings in the audience.



Figure 24: Suzanne Sommers at RAAD Fest [Photo taken by Author August 2016].

Here, Sommers – former TV star, self-help author and outspoken critic of chemotherapy, conventional cancer drugs and mainstream oncology (Kay, 2013) – spoke on the topic of *Bio-Identical Hormones, the Juice of Youth* gaining no less than three standing ovations from the audience. Her talk made what appeared to be contradictory, scientifically null statements such as “I don't want chemicals in my body” while also simultaneously touting the benefits of so-called ‘bioidentical’ hormones in restoring postmenopausal vitality and sexual function. Sommers, who appeared on stage wearing a leopard-print coat, made appeals for technology to restore or rejuvenate an assumed natural, biological equilibrium within *homo sapiens* – implying that the supposedly harmonious state of nature represents an aspirational normative standard. Unmistakably, this stance bares some direct resemblance to critical post-humanist analyses (Braidotti, 2013).

The paradoxical standing of these claims – namely that recent forms of high-technologically-reliant intervention, such as stem-cell and hormone replacement therapy should work to restore some natural order to the aging human body and

mind – appears at odds with the transcendent ambitions of transhumanism, which tends to see humanity and nature embroiled in a more combative relationship (Thiel, 2015). Never the less, Sommers talk made for one of the most well-received performances at RAAD – perhaps owing to some combination of her celebrity status, highly personable mode-of-address and playfully rebellious message - during both the years that I attended. No doubt her popularity speaks to both a growing public scepticism towards scientific-medical authority and an increasingly self-directed, consumerist orientation towards healthcare (Lupton, 1997; Hardey, 2001; Rosenthal et al. 2002; Conrad & Leiter, 2004; Conrad, 2005). Clearly, the connection between transhumanism and alternative subcultures (Haywire, 2011) alongside the more individualistic, anti-authoritarian tenants of THEA (Sandberg, 2013) leads to some of the suggested emerging science-based enhancement modalities – those which can be loosely described as consumer technologies – associated with THE falling outside the scope of falsifiability (Popper, 1963), and into a murky space between science and non-science (Gieryn, 1983). Left unchecked by the most rudimentary scientific modus operandi, say, via standardised testing, randomised control trials, or peer-review such modalities associated with THE can depart from the principles of rationalism into the more self-indulgent domain of complementary and alternative medicine (CAM) – a disparate collection of therapeutic approaches, typically assigning a high-value to patient-centred, self-led intuition (Barett et al. 2003), while actively resisting imposition of scientific-evidential standards by any centralised regulatory authority such as the FDA (Faloon, 2012).

In RAAD Fest's promotional material, technical presenters were touted in terms of their formal scientific and/or medical credentials, with reputations actively managed onstage, where any perceived break from the orthodoxy of their respective fields – owed to niche research interests, or perhaps overly generous interpretation of data – was downplayed as them being somehow ahead of the curve per the hyper-optimistic tone of the event. This initial laboured framing then gave rise to further tension, as the esteemed guest speakers attempted to marry-up the supposedly evidence-led scientific-rational basis of their work with fuzzier speculative claims, all the while carefully working to maintain the wholly positive, future-affirming, forward momentum of the conference. One technique which was apparently called-upon to dilute this otherwise palpable tension in the room was a type of bread and circuses

style delivery of content, in which presenters – and also specially selected artistic performers – deliberately played on the more sensational aspects of their projects.

As a direct consequence of what might be viewed – no doubt most charitably – as the conference organisers deliberate efforts to bridge the gap between scientific-technical experts and laity, during some of the conferences more extravagant moments, attention appeared to be diverted away from the scientific or technical standing of the inceptive THE innovations in question, and instead drawn toward a more immediate, highly visceral celebration of youth and vitality. To be sure, at times it appeared there was a deliberate push for the attendee's critical faculties and wider social-political and historical situational awareness to be dampened-down – or even lost completely – in the momentary, ecstatic embrace of life.

*THEA as Jovial, Visceral Performance:*

One way the RAAD fests appeared to be quite distinctive by comparison to other locations I visited was through obvious efforts to excite, entertain and ultimately, at least in principle engage the audience. This novel, deliberately over the top approach – which Paul Spiegel described as ‘circus-like’ – combined with an already high-energy attendee base, delivered many surreal and comedic moments during both years conference proceedings, with such stylistic-rhetorical flourishes ranging from the slightly kooky to the straightforwardly absurd. As one clear example of the latter, at RAAD 2017 Jeffrey Life a.k.a ‘Dr.Life’, a 79-year-old Physician and Author, opened his talk with a Chippendale-style strip-tease, emphatically throwing his tie into the crowd and then seductively unbuttoning his shirt – carefully orchestrated to a sensual rhythm played across the PA system – before ultimately disrobing to reveal his age-defiantly toned abdominals:



Figure 25: 'Dr. Life' Undressing On-stage at RAAD Fest [Photo taken by Author August 2017].

In the immediate aftermath of Dr.Life's presentation, I asked Gennady Stolyarov II – professional Actuary, and Chairman of the US Transhumanist Party – for his take on the unusual display which had unfolded before us: "I appreciate some older people have good bodies, but we don't need to see them" was his tactful, measured response. Of course, such sensationalist renderings of THE are clearly at risk of detracting from other more sober and serious readings of transhumanism – no doubt of the kind which would be preferred to garner mainstream credibility and political influence for the movement. Never the less, the physically embodied highly sensual expression of youth and vitality was a recurring theme at RAAD. Another similar celebration of the youthful body as expressed visually and in physical form appeared during a showcase presentation titled *Ageless in Action* led by Ilana Lea, founder and owner of *Enerjoy Fitness*, a Scottsdale- AZ based lifestyle coaching company with emphasis on achieving and maintaining optimal health forever (Enerjoy Fitness, n.d). Lea and her entourage's interlude before lunch on day 3 of RAAD 2017 resembled a dance workout session, featuring scantily-clad bronzed athletic figures flexing in a manner apparently inspired by Southern Californian bodybuilding culture.



Figure 26: ‘Ageless in Action’ at RAAD Fest [Photo taken by Author August 2017].

RAAD's distinctively performative *infotainment* approach to THEA wasn't only limited to body-worship, with the 2017 line-ups other creative, artistic musical attractions including a bizarre immortality-inspired DJ set from Kevin Brown – the adult son of Charles and Bernadeane Brown, the original co-founders of the *Eternal Flame Foundation*, which later became *People Unlimited* (Van Velzer, 2014) – as well as live performances by flamenco dancer Javier Hernandez, and an immortalism-themed band *Living Proof*. No doubt, there were times when this exuberant and outgoing spirit of the festival clashed with my own quietly reserved British-sensibility, not least as I came to be reluctantly pulled by a 63-year-old's extra-ordinarily muscular – perhaps HGH-enhanced – arm to join a conga-line at the ‘RAAD after hours’ music, dancing and socialising evening event. It's difficult to deny, as Max More neatly phrased it: RAAD was working hard to “put the fun into forever”. Whether this approach will ultimately be of any real service to the other more long-term strategic goals associated with THE and THEA remains a more complex and altogether open question. Essentially then, the events novel programming represented a deliberate effort on the part of the organisers to dilute advocacy for the somewhat nominally empirical-rationalism-based THE modalities with other more whimsical, experientially-based activities – those speaking to far subtler aspects of the human condition, indeed, the likes of which may be all-to-often otherwise overlooked by the reductive-materialist lens of science. In short, RAAD

promoted a holistically wholehearted embrace of a promise taken to be imbued within emerging science and technology, and the unlimited future which it could – or indeed would – propel us toward someday in the not-too-distant future.

### *Technology as Consumable ‘Hope’*

Notwithstanding whatever rationalistic-empiricist principles which some advocates might take to underlie THE (Marcen, 2011; Istvan 2013), during my time in the spaces associated with THEA there were occasions when such reputedly hard-headed suppositions appeared to give way to far more enchanted, almost other-worldly notions of technology as a bringer of *hope*. In this sense, over the course of my time in the field I observed much gesturing towards not only the present-day uses or applications of technology, but also a recurring tendency for actors to issue highly optimistic future suppositions as to the profound future possibilities for THE – purportedly those reached by reasonable inference on the basis available evidence. Once again, this phenomenon appeared most pronounced at the RAAD Fest field site, where the idea of technology as a synonym for hope was raised quite explicitly during the 2017 event by Liz Parrish, CEO of Gene-therapy focused Biotechnology Company *Bioviva*:



Figure 27: Liz Parish “Technology is Hope” at RAAD Fest [Photo taken by Author August 2017]

Here, Liz spoke about the importance to channel investment in the field of regenerative medicine, specifically a venture close to her own personal and professional interests: talomese-inducing gene-therapy, which was framed as a potential 'cure' for the 'disease' of ageing. In this sense, genetic-technology was heralded as the last bastion of hope in the face of the otherwise inevitable certainty of personal degeneration over time, and ultimately death. Of course, the salvation-type framing of Liz's talk appeared particularly powerful given the longevity-focus of the conference and the apparently advanced age of many attendees. On this point, field-notes captured following my first impressions of RAAD Fest the previous year reflected upon apparent tensions between the oft-stated promise of emerging technology to extend life-span, and the corresponding potential to capitalise on consumer desperation. Indeed, viewed from a cynical perspective, I found the calculated combination of novel high-energy, techno-centred branding and consumer merchandising – which ultimately implied deliverance of relief from the ever-pressing frailties of the ageing body and mind – to be greatly troubling during both my years attending RAAD Fest. In this sense, I was struck by how the inherently fringe, and as yet mostly unverified status of what were quite explicitly billed as prospective longevity enhancing THE-type consumer technologies might, quite feasibly, be turned to exploit a vulnerability and increasing helplessness late in life.





Figure 28: Aged Attendees in The Dinner Hall at RAAD Fest & *'Pumped for the Future'* Merchandise [Photo taken by Author August 2016].

When I raised these concerns with the transhumanist speakers who I interviewed at the event, Aubrey de Grey told me, by way of resolve, that the entirely more esoteric therapies on offer were simply a matter of personal, consumer choice within an open marketplace of ideas. Moreover, as Ben Goertzel suggested, RAAD's focus on the sale of consumer products – as well as chiefly the physical attributes of youth – could be seen to represent the need to tailor the format of Technological Human Enhancement Advocacy building efforts to effectively fit within the social norms/cultural atmosphere of particular settings. In Ben's view, there was nothing inherently consumerist or body-focused about THE, and while he agreed emphasis had inevitably come to be placed on such aspects in this setting, he reasoned this was only to appease the appetites of the Southern Californian demographic who formed most of the attendee-base at the event. This culturally-relativist take on the norms and values associated with THEA allowed him to maintain his own A.I. focused, Cosmist-minded position on human enhancement (Goertzel, 2010; 2014), while still validating those highly embodied, egocentric libertarian approaches to THE advocacy which appeared the majority viewpoint at RAAD.

Irrespective of circumstantial nuances, however, it is apparent on a deeper level, appeals to technology as a source of hope was invariably tied to the previously stated strongly normative assumption that *death is wrong*, and so, therefore, warranted some form of – in RAADs case, consumption-based – remedial action. In the interest of gaining a deeper understanding the motivations and drivers of this world-view, I sought to elicit the feedback of my interview respondents as to the ideological-existential origins of this apparent stark dismissal of what can be seen to represent the otherwise taken-for-granted, ordinary human life-course. On this point, some of those who I spoke with suggested transhumanist philosophy has a fundamentally rejectionist element to it, and as such transhumanists were essentially striving to use science and technology to effectively resolve the highly ambivalent Western attitudes towards death and with it, strongly disavowing the more naturalistic cosmologies found within other philosophical traditions around the world (Fuller, 2006: C11). As independent film-maker and co-director of transhumanist-themed documentary *The Future of Work and Death*, Sean Blacknell suggested:

“[...] Western Philosophy doesn't offer that much in the way of consolation over death, but I think transhumanism is also a rejection of eastern philosophy, the idea of completely accepting your own finitude and that you are mortal. I think there's some truth to that.”

**Interview with Sean Blacknell, Vue Picadilly, London. 25<sup>th</sup> September 2016.**

Here, Sean implies the so-called immortalist promise of transhumanism could itself provide a highly scientific (Sorell, 1991), form of consolation over human mortality. He suggests transhumanists are attempting to harness the yet inceptive or undefined modalities of emerging technology to assert absolute wilful control over the individual life course – and with it actively resist submission to the multiple losses and tragedies otherwise brought about by the natural order of life on earth. Much like how Scott Jackisch recognised how transhumanist preoccupation with overcoming death – perhaps owed to some underlying existential dread – can give way to highly insular, cult-like forms of thinking, Sean goes a step further to suggest that THEA might somehow be rooted in a value-orienting deficit found within the broader philosophical sub-structure underlying so-called Western thought and identity itself. No doubt, this perspective once again echoes suggestions that transhumanism somehow arose as a response – maybe even as an intentional antidote – to the Nietzschean ‘death of God’ (Tuncel, 2015): this theme will be revisited in the final chapter to follow. In any case, as these findings have illustrated, despite literature typically exulting the status of rationality (Marcen, 2011), in practice there appeared to be an unmistakably strong faith-based component to at least some – not least U.S.-based longevity focused – forms of THE advocacy encountered over the course of the study.

## CONCLUSIONS

The chapter has explored how existential beliefs and assumptions – apparently operating on both a conscious and subconscious level – were found to impact upon the symbolic construction and practice of transhumanism and technological human enhancement advocacy more generally. In existential terms, it is apparent the THEA

worldview is, to a large part, predicated on the assumed rational intelligibility of the cosmos, a perspective which has precedent in Judaeo-Christian renderings of human beings uniquely privileged creation *imago Dei* – in the image of God (Garner, 2006). This theological idea – itself predicated on a species-distinct power of the mind, loosely proximal to the Western *logos* – appears to have been largely secularised through the Enlightenment (Fuller, 2010), allowing such metaphysically-based onto-epistemic assumptions to apparently co-exist with minimal tension alongside the core transhumanist concern for materialism (Young, 2005). Far from holding atheism to be integral to transhumanism, most THE advocates who I encountered instead emphasised the need for transhumanists not to be dogmatically bound to clerical authority, and spoke of the high-levels of religious tolerance typically found within the movement overall. Others suggested transhumanism could fill the existential void left by the rejection of theism, offering atheists a more positive, actionable philosophical framework – and contribute to a renewed sense of purposeful, forward-movement in the world.

For those who were open to enchanted modes of framing their THE-oriented activities, some THEA organisations I encountered – such as the Church of Perpetual Life and the Mormon Transhumanist Association – overtly embraced levels of continuity with religious or quasi-religious motifs. To no small part, this parity appeared to be formed around the shared self-transcendental premise underlying many – if not all – THEA-styled belief systems, a scheme of orienting-action comparable to the descriptions of moral and spiritual elevation found in many world religious traditions. Equally, I found some particularly close-knit groups organised around THEA aspired to provide both community and social cohesion alongside an all-encompassing philosophy of life, undoubtedly a combination of the kind which would have conventionally been the purview of religious institutions. Central to both theistic and atheistic renderings of transhumanism is then the core existential assumption that the rational human agent is, on the one hand fundamentally flawed and severely limited, yet also somehow innately capable of achieving redemption – and maybe even ultimate salvation – through the strategic application of science and technology. In this respect, for many transhumanists, it appears the grand-narrative or plot of humanity is one of overcoming limitation, and as such, formalisation and continual renewal — of compelling narratives deliberately reinforcing this

apparently self-transcendental promise, especially in the face of chaotic uncertainty — is a core-feature of THEA projects.

At its heart, THEA appears to emerge out of the ether, somewhere between rationalism and faith, with advocates claims oscillating between both realms as they struggle to meaningfully differentiate between the ‘would-be’ versus the ‘could-be’ of human technological enhancement. Sometimes this struggle is unconscious and understated, perhaps an inevitable by-product of human-cognitive bias, other times it appears to be a deliberately concealed sleight of hand, born from either personal indulgence, professional necessity or in the interest of fulfilling some other strategic aim. In either case, all such intuitions appear to rely heavily on long-standing conceptual architecture – with roots predating the modern era – clashing with recent shifts in society and culture, and ultimately coming to meet inside the postmodern secular-holy crucible of emerging technology. Having examined in detail the various constituents, mobilisations, politics and existential assumptions associated with THEA across a range of locations where the practice was found, it is now necessary to review the key findings related to each domain of concern and synthesise them into an appropriate conclusion.

## 8

### The Techno-centred Imagination

*“If we have our own why in life,  
we shall get along with almost any how.”*

**-Friedrich Nietzsche *Twilight of the Idols* (1889)**

In his final writings, Nietzsche suggested that by adopting a compelling enough personal ‘ends’ the individual can entertain, and come to self-justify, a near boundless range of ‘means’ in attempting to realise this imagined goal. Perhaps unsurprisingly, that is, given the *prima facie* ideational nature of THE advocacy, this study found the foremost constant shared across the range of locations associated with THEA is a novel type of imagination which assigns primacy to science and technology. If nothing else, transhumanist philosophy affords its adherents an action-orienting *Telos*: Once such a destination is plotted, reward comes in psychic-ideational freedom of *movement*. This chapter presents some concluding thoughts on the research project, formally closing the thesis by synthesising the findings of the core analytic chapters to address the gaps in existing literature — principally those surrounding empirical studies of science/technology advocacy as a social movement – raised within Chapter 2. The chapter divides into three sections, which summarise and conclude the thesis: The first section revisits the core thesis themes, outlining the main findings from the study explicitly as they relate to existing literature within the field of social movement theory. The second section offers some more general reflections on the experience of conducting this project, discussing how the practice of multi-sited methods was found to be of both practical benefit and hindrance at different stages of the research. Finally, the third section provides some basic suggested directions for future research on the topic of technological human enhancement advocacy, and indeed the study of non-spatially and spatially determined science and technology-centred advocacy cultures more broadly. It suggests two areas deserving of further study: Ideational Conviction Mapping and Institutional Steering Mechanisms. I make the case these two strands of interest will

be of much relevance to understanding the various psychological and social bases which influence support for emerging science and technology in the years to come.

## 8.1 REVISTING THE THESIS THEMES

True to Mores (1990) initial formulation of Extropian-Transhumanism, clearly present-day mobilisation around THEA represents comparable attempts to provide something of a third-way to effectively counter the destructive ideological schism drawn between despairing nihilism and sterile scientism which might be otherwise characteristic of late modernity. Ultimately, I argue that that narrative is an important mechanism which GATHE use by way of response to this onto-existential crisis – and it's use in social contexts associated with THEA functions to cultivate the hyper-modernist feelings upon which techno-centrism is both initially achieved and continually legitimated. On this point, it should be noted, the core focus which THEA advocates direct toward technology is neither trivial nor co-incidental: Technology, by its very nature, always already blends the material with the spiritual and transgresses the line between real and imagined possibilities. The main thrust of this thesis is the claim is that though there is an implied material constancy to technology as an application of observable-material processes, in the case of emerging technology such modalities manage to retain an immaterial *techne* which is both majestically artful and future-oriented – and above all, imbued with rich potential. While most radically accentuated in Transhumanism, and indeed other THEA efforts which wear their unashamedly technologically-solutionist thinking on their sleeve, the techno-centred imagination is a residual feature of late modern culture. It is therefore shared – to a greater or lesser degree – among all pro-science supporters who seek solace in the certainty which they believe the scientific method provides.

In this respect, the Techno-Centred Imagination is essentially the cornerstone of our nominally secular-materialist perpetual sleep-walk through the techno-informationally saturated unknown – a last bastion of hope, weaving and dodging, mutating into different formats as necessitated by the economic, political and social conditions of the locale in which it emerges. It is an enduring feature of our time, and one which is not likely to disappear – but rather to the contrary, will only be

bolstered. Not least, by the chaotic uncertainty which surely lies ahead as new technological schemes rapidly displacing and dissolving with seemingly ruthless empirical precision the former anchorage points for personal identity, and economic-structural conditions associated with what might reasonably be described as the ordinary human life course. As such, 21st century technoscience unbound is yielding new strategies to secure against rapid change and growing complexity. In short, techno-centrism is an effort to keep one foot grounded in the rational-empiricist material world of the observable and factual, while also simultaneously posturing to the *terra nullius* boundless horizon of the future (Groves, 2011). It is a construct of both stability and dynamism, promising its adherents an exciting path forward, animated by the tried and true conceptual and cultural architecture from which humanity allegedly forged the modern world, only with a highly individualistic accentuation. Again, this political philosophy reflects the neoliberal climate in which my observations were based.

To make explicit how the above reading was reached, at this point it is necessary to reflect upon the core research question which initially opened the thesis: How can Technological Human Enhancement Advocacy (THEA) be characterised across a range of locations where the practice is found? Again, to effectively operationalise and produce an adequate response to this question, it was necessary to break it into the set of individual sub-questions. These will now be recalled briefly. Firstly, I worked to generate a level of demographic insight through a question related to the populations associated with THE support and advocacy:

A) *Who are the constituents of THEA? What kind of boundaries are evoked by this constituency, how are they maintained?*

At a basic level, through this question, I sought to gain an understanding of the types of person who are attracted to technological human enhancement type advocacy. Moreover, I wished to examine how they tended to position themselves to other comparable efforts related to THEA, and indeed wider society in general. Additionally, I attempted to capture the range of programmatic efforts and mobilisations associated with THE by considering the following:



*B) What kind of specific goals might THEA be working toward?*

I set out to discover not only how the 'conventional' technical aims and ambitions associated with transhumanism or THE were being approached in situ, but also another relatively unreported area – the renderings of additional social/cultural value which might ultimately be derived from enhancement technology focused advocacy and advocacy groupings. In this respect, I was attuned to both the intended goals for technologies of human enhancement, but also the goals for social movement activity organised around this idea. On a related note, I also sought to investigate:

*C) What kind of political beliefs or belief-systems are associated with THEA?*

In this respect, taking a cue from social movement studies I also wanted to detail the range of political suppositions and formal affiliations which I could find associated with both transhumanism and THEA more generally. This area of investigation was intended to situate the movement with respect to its main political ambitions, and types of collective action sanctioned by these affinities. This distinctive analytic area represented an effort to draw focus toward the complex normative-ethical dimension to cultures formed around the prospect of THE, a concern for the likes of which was also reflected in the last research question, namely:

*D) What kind of existential beliefs and belief-systems are associated with THEA?*

Finally, I intended to investigate the variety of root-existential assumptions which I could find travelling alongside THE advocacy efforts. I hoped this area of study would reveal the forms of deep legitimation behind THEA, and perhaps the more nuanced emotional or spiritual drivers behind the wish to enhance or somehow augment human existence using technology. Having recalled the main research areas, it is now necessary to synthesise the key findings of pertinence to each domain, and with it provide an adequate response to the core thesis question.

*Constituents, Direction, Politics & Existence:*

## *The Techno-centred Ensemble*

Ultimately, it was through the combination of these various domains of concern which allowed me to build a multi-faceted, multi-locational account of THEA.

The research found constituents of THEA to be apparently drawn from a variety of backgrounds, appeared motivated by an array of psychological and economic interests, and also apparently possessed highly variable level of scientific and technical expertise. These included *Hobbyists*, *Fantasists*, *Specialists* and *Consumers*. This rudimentary model of different constituent groups encountered can be used to demarcate both the attainment of formal qualifications regarding science and technology, as well as the gross interest/motivational systems which attract advocates toward THE and THEA participation. Equally noteworthy in this regard, was the significantly high-level of affinity for projects associated with THE expressed by some transhumanists – which some respondents notably framed by way of direct reference to apparently lifelong yearnings to pursue physical immortality. In this regard, it is striking how some particularly devotional advocates internalise narratives of technological transcendence – and fully embrace the outsider status which such interests might afford – whereas others, such as those visiting Futurist-type advocacy groupings may do so driven by more fleeting opportunist/strategic investment interests. To be sure, this speaks to the twin status of technology as both one of marketable, material effect – and thus potential engine of economic prosperity – and a potential source of satiation for deeper more eclectic interests, fantasies and existential yearnings.

Essentially, in terms of Mobilisations, within chapter 6 I have argued that many of the specific goals I found to be associated with technological human enhancement, and its advocacy generally conformed to those referenced in existing literature produced by insider accounts from within the movement (i.e. Pearce's Three S's) on the topic of transhumanist ambitions and programmes. That said, my observations also revealed an array of contradictions and fallacies in attempts at carrying forward these ambitions, essentially stemming from programmatic challenges related to matters of individual choice as they related to the prospect of technological enhancement. Also, ideational tensions were apparent as utopian stands of advocacy

clashed with the nominally more rationalist-pragmatic approach towards THE valorised by others. In addition to a general endorsement of the idea that science and technology could provide a vehicle to maximise human capabilities across various domains of concern (chiefly those related to maximizing longevity, intelligence, wellbeing, material prosperity), I also found many advocates placed great emphasis upon the active construction and maintenance of compelling narratives which might be called to activate and energise those sympathetic to the prospect of technological human enhancement. Moreover, I also found much evidence that ICT continues to provide a key platform for transhumanist mobilisations, and the continuation of apparently Enlightenment inspired efforts to capture and systematise emerging forms of knowledge relating to their activities. If nothing else then, my respondents generally tended to agree with an importance to the use of narrative including tropes in the interest of forging collective identity and community of values – principally one which is not geographically determined, but instead, through new forms of transmission via technologies of information and communication, globally dispersed across both the developed and developing world.

It is worth reflecting upon the significant role information and communication technologies have had towards both instigating and facilitating the growth of transhumanism. I argue this close historical relationship is far from a trivial feature of THEA, but rather that the ICT platform represents an integral component of techno-centric idealism through its ability to simultaneously encapsulate both semiotics and technics. The informatics-binary and user-generated nature of contemporary electronic networking technologies then grants ICT a dual-status as both an objective technical tool and a subjective repository of symbolism. In this sense, the architecture of Web 2.0 not only enables but actively encourages the formalisation and exchange of digitally-assembled semiotic renderings of the self, allowing for online and offline mobilisation around elaborate ‘would-be’ and ‘could-be’ technical projections, the likes of which challenge the already blurred boundaries between science fiction and science fact. On this point, Ernst Cassirer (1930) suggests what we now call information technologies are ‘purely symbolic’ technologies, liberated from both analogy and mimesis (Mitcham, 1994: 42). In other words, the highly symbolic and constructed quality ICT allows for the encoding and transmission of mind and meaning, with such unbounded networked

electronic exchanges channelling and widely disseminating the constructive interpretative element of consciousness – perhaps akin to human nature – which Lewis Mumford took to animate technics.

Despite much lip-service to the value of efforts geared toward binding THE advocates together through the articulation of a shared vision, I also found a range of multiple ambivalences surrounding the role of organised political activism, not least owing to a sense of disaffection towards the political establishment and a strong affinity for the notion of autonomous self-direction. Related to this point, is the yet open question among transhumanists as whether transhumanism ought to be approached as a philosophical, cultural and political movement. In any case, no matter what misgivings they might have had toward the political status quo, many believed in the potential coming of technologically driven social or cultural revolution – or some other potentially cataclysmic disruption soon to follow in the wake of emerging technologies. Social activism was advocated by some, who suggested a significant or even sole purpose of the transhumanist movement was to create compelling narratives to for sympathisers to unite around to advance their projects. At the same time, it was clear there was also a significant number of actors within the spaces associated with THE who I encountered that imagined themselves and their schemes to be in a sense *post-political*. In this sense, at some sites, I noticed an ambient assumption that somehow wider social democratic accountability was either unachievable or undesirable in the technology development process. Again, these accounts tended to either directly or indirectly draw upon the Enlightenment-derived myth of inevitability to scientific and technological progress, an arguably naïve and short-sighted view, which was often held in tandem with other ideas surrounding libertarian ‘trickle-down’ economics.

When investigating the existential claims associated with THEA, I found contrary to the position of some particularly vocal atheistic members of the transhumanist movement, atheism was not by and large considered to be a requirement of participation. Rather, the general consensual was that instead aversion to clerical authority or dogmatic adherence to religious tradition would almost certainly be practical hindrances to the full realisation of THE ambitions. In this sense, among other things, it was suggested that Transhumanism could be seen to represents a kind

of attempt at building-out the philosophy of atheism, which to its detractors is pragmatically lacking. At least some GATHE went as far as to overtly embrace theistic themes, with organisations such as *The Church of Perpetual Life* quite directly and unreservedly occupying a place somewhere in the nexus between Science and Religion. Others – such as *People Unlimited* – rather claimed to be highly secular, yet unmistakably appeared to follow practices and use language which could well be interpreted to carry a nascent religious undertone. Paradoxically then –given the centrality of technology in THE worldviews, and indeed Transhumanism's early inception online – a significant source of value which respondents reported deriving from such theistic and quasi-theistic operations was the capacity to stage offline meetings. They felt this getting together enabled them to foster shared values, with community created and maintained through real-world social functions for their member base. Equally strikingly, I also found sites, particularly those on the West Coast of the United States, where THEA's nominal relationship with rational-empiricism appeared especially tenuous. In these settings, it appeared THEA appeared to dovetail closely with fringe, esoteric 'alternative' modalities, a consequence of marketised consumer medicine, the shifting epistemic dynamics of recent years, and the highly contrarian countercultural ideals typically valorised by THE advocates.

### *Ensemble: The Techno-centred Imagination*

In sum, while technological human enhancement advocacy can be seen to assume a range of different formats depending on the social and cultural circumstances in which it is practised, all iterations appear to share some standard features which, I argue, amount to a distinct non-spatially determined psychic-social-ideational entity: *The Techno-Centred Imagination*. Simply put, the overarching grand narrative shared among transhumanists and other THE advocates alike is essentially one of overcoming human limitations, but this motivational narrative trope is inevitably complicated by the social, political, cultural and economic circumstances in which the THEA impulse is found and enacted. Some scientific-technical specialists whose livelihood depended upon support for THE sought to actively downplay or minimise the outlier status of THE during our discussions, suggesting to me their ambitious

and highly speculative schemes were essentially not radically different to the advancement biomedical 'science as usual'. In this regard, these activities were typically characterised by advocates in relation to an over-arching conceptual framework heavily imbued by myths associated with the European Enlightenment, including scientific-technical progress and conquest over nature. Not least, the clear majority of advocates who I encountered appeared to share in a predominantly – although admittedly, not exclusively – materialist world-view, and highly endorsed principles of rational empiricism as a key means for advancing their scientific and technological projects. This nominally – although not necessarily actually – materialistic worldview and repeated namechecking of the scientific method provides the linchpin which imbues a certain type of legitimate, principled possibility to the schemes associated with THEA. In so-doing, proponents of THEA typically call-upon highly scientised (Hayek, 1952; Sorell, 1991) concepts and language, while also simultaneously drawing heavily upon the use of narrative to lend history, coherence and continuity to their visions.

In this regard, looking at the THEA through the lens of Social Movement Theory, much like other 'new' social movement forms, the Transhumanist movements appear centred around issues of human self-identity – yet this concern is expounded radically outwards, ultimately to the level of our species being. Indeed, this techno-scientific locus of identity has been captured elsewhere in commentary on the trend towards increasingly biologized understandings of the self (Rose, 2007). To be sure, such a trend is underscored by shifts in the political economy of knowledge in recent years, which has seen a rising standard of scientific and technical literacy across the general population, as well as epistemic shifts which have simultaneously broadened the scope of credible evidence, while also diversifying forms of legitimate expertise. No doubt, transhumanist advocates embrace this new increasingly liberal pluralised epistemic environment to paint a compelling picture of ever-powerful self-determining humanity, no doubt borrowing heavily from the visionary, creative imagination found within the science-fictional foregrounding of the movement. Simply put, the process of *imagination* is a feature of mind which purposefully synthesises accounts of past, present and future to form a coherent vision: Since the Techno-Centred Imagination is principally future-oriented, it is thus always ideationally articulated, and unavoidably incomplete. While the use of imagination-

come-extrapolation reaches a kind of fever-pitch in the more eccentric transhumanist renderings of the future, it can be argued the basic sentiment behind this purposive mental modelling is of the sort found in more sober efforts associated with the development of emerging technology in the 21st century. In a certain sense then, the Techno-centred Imagination is an element of the palpably familiar yet unspoken, long-established conceptual framework evoked by engineers and technicians in their efforts to perpetually drive innovation forward and meet the challenges of the day.

To be sure, the seemingly unshakable impulse to develop all-encompassing scientific or technological fixes for the chiefly cultural and politically-based problems befitting humanity – what Morozov (2013) calls ‘solutionism’ – offers clear testimony to the profound motivational framing capacity of techno-centrism. As such, it would be tempting to assume that the development of technology under scientific-realist principles is somehow enough to provide THE advocates with a common protocol to work under. However, based on my experiences during this project I argue in practice the contrary is true: both the technologies related to human enhancement and the advocacy efforts which surround them appears driven by an array of interests. The fundamental complexity and as yet largely inceptive status of the technologies is a point of much contention between GATHE ‘insiders’ and ‘outsiders’ alike, no doubt making it more difficult than ever – especially for non-specialist publics – to desegregate between the efficacious and ‘legitimate’ versus otherwise ‘illegitimate’ or outright fanciful prospective enhancement modalities occupying this space. Those of a libertarian persuasion appear more than happy to let late capitalism determine the efficacy of said products, as to them relatively unbounded market forces offer the surest way to coordinate those significant financial resources necessary to genuinely move the dial forward on the ambitious projects associated with THE. Further to this point, it also remains unclear the extent to which those eccentric figures leading the development of such technologies believe their hype, as support for such sketchily-defined techno-scientific possibilities which are yet to arrive are inseparably tied to economic interests. Moreover, THE is also fed by a technology development culture which celebrates Randian heroism, and in which contrarian dissent is venerated.

The palpable tension between established scientific orthodoxy and the more roguish, radical outlier status of transhumanists appears exasperated by the stories told between advocates about how scientific revolutionaries of years gone by were those who were initially dismissed or outright ridiculed by contemporary knowledge authorities of the day, only to be ultimately celebrated in the broader sweep of history as pioneers who were boldly ahead of their time. To be clear, I argue the myth of the rebellious, disruptive outsider who ultimately propels history forward is not geographically limited to Silicon Valley and those innovation cultures on the West Coast of the United States, but rather it speaks to a certain determined, world-beating self-conception which many THE advocates professing to be on the leading edge of technology consistently hold about themselves across a range of settings. Indeed, the concept of technical revolution is itself quite intimately tied to counter-cultural ideals, of the type which can apparently become deeply embedded within the psychology and cultures surrounding emerging technology, as has been well staked-out by various cultural and political commentators in the context of ICT. While such a dissident, self-determining framing is perhaps most obviously captured in the proactionary, non-institutionally constrained spirit of biohackers, I found a similar rhetoric evoked by commercial actors in settings concerned with radical longevity. In this respect, at RAAD the fringe status surrounding those technologies at hand tended to be tactically framed as being somehow 'ahead of the curve' – with the effect of flattering the select attendee-base who was privy to such information.

No doubt, the above point raises the role and significance of narrative in the creation and maintenance of THEA. Fundamentally then, the highly and fuzzy speculative—or seen most charitably as inceptive – nature of most THE projects means it is necessary for those seeking to garner wider public interest and acceptance for the 'would-be' and 'could-be' of such developments need to import sources of legitimisation from elsewhere. As such, activists seeking to rally-up support for the prospect of Technological Human Enhancement do so by drawing upon well-established conceptual motifs speaking of the transformative power of rational human agency directly imported from the humanist tradition in a bid to lend credence to the prospect of THE. In this sense, despite their preoccupation with the infinitely transcendent promise of allegedly surrounding scientific-materialism and technology, perhaps above all else transhumanists are – consciously or otherwise –



heavily invested in a process of elaborate story-telling and normative meaning-making, which has always been integral to the construction of the human outfit, and with it the projection of humanist ideals. This latest trend toward ratcheting-up enthusiasm for the notion of ever-more science and technologically intensive re-incarnations of humanity appears to resemble, at least on a certain level, a last-ditch attempt to save the modernist project being sucked into a nihilistic black hole after the collapse of those grand legitimating narratives which formerly offered it purpose and direction. From this perspective, the long-running enlightenment trope of progress – for most, otherwise thoroughly debunked – has been re-animated given the steroids of rising complexity, scientific-technological literacy and socially networked utopian groupthink.

Accordingly, despite appeals to evidence-led policy, given its heavy reliance on technologically rehashed humanist narratives, attempts at achieving 'mainstream' transhumanist political mobilisation is a laboured process. This difficulty is due to both, on the one hand, a climate of public scepticism toward the more elaborate and self-indulgent transhumanist visions and equally advocates own commonly held perception of a woefully outdated insufficiency to existing schemes of democratic governance. For those who fully and unapologetically embrace the material-excesses of technological determinism – including, but not limited to the powerful Silicon Valley-based actors I found bank-rolling said elaborate and speculative projects – maintain a strong demonstration of capacity is on its own enough to effectively captivate public attention and support, and with it galvanise further action. Thus, the prospect of transhumanist party-politicisation appears a divisive issue across many THE advocates, with some preferring to limit the remit of transhumanist values to a more moderate/personal level – i.e. characteristic of a philosophical or cultural movement. To be sure, at all levels of THEA mobilisation, a significant challenge for THE advocates and activists alike is to effectively traverse the wobbly balance-beam teetering between the rational versus motivational aspects of technological human enhancement, and tell the story of transhumanism in a way which others might find compelling. Clearly, those without high-levels of technical proficiency and expertise attempt to contribute toward realising the transhumanist vision by instead focusing on winning over the hearts and minds of the general populace. This requires telling a compelling story of human entanglements with technology, and

with it ideally garnering the level of societal acceptance and support necessary for the development and uptake of new technology within liberal democracies.

For some THE advocates who are particularly attuned to the public perception of transhumanism, this will require jettisoning the transhumanist descriptor all together, given the ideological baggage and chequered public perception which surrounds the term. Such a tactical rebranding of the movement or a public-relations minded sleight of hand might then allow those sympathetic to the cause to gain credibility by effectively distancing themselves from the more outlandish, far-fetched visions and eccentric characters which currently populate the spaces associated with transhumanism. However, even if those advocates hoping to gain credibility and genuine influence over public policy moved to purge the less well-refined elements of transhumanist culture and assemble under a different header, any attempts at boosting traction in this way must still contend with the lack of cohesion within the movement overall owed to the highly disparate array of interests currently driving both THE and THEA. Of course, this is in no small part due to the competing influence of those powerful new actors emerging in the Post-Cold war political economy of science, which has witnessed both a significant migration of control over funds from the public to the private sector, alongside a corresponding shift in the locus of said funding from high-energy physics to biomedicine. Against this fragmented backdrop, those more collectivist-minded THE advocates hope their efforts might somehow help the sciences, technologies and publics move together in greater unison, enabling all three to march purposefully forward into the future with a renewed sense of optimism born from the significant – perhaps infinite - potential they take to be inscribed within humanity's scientific-technological evolutions.

Underneath all these various normative-rhetorical flourishes – born from the situational circumstances in which the ideal is mobilised – this potential is the focal point for a range of highly diverse technical, social and political activities which coalesce and collide in ways that are not new, but rather reflect deep-seeded structural and existential anxieties that have long bubbled away just beneath the surface of late-modern society and culture. These incessant spectres haunting the contemporary mind – the death of God, growing scepticism toward the institutions of democratic governance, and rising doubt in the integrity of the modernist project

itself – crept up and body-snatched the humanist tradition, aided and abetted by the near-mythical, exalted status of high-technology as a catalyst of change. As such, THEA as a social and cultural practice arrives *a posteriori* after the consolidation of the Techno-centred Imagination (TCI), which in itself is formed in the face of rapidly dissolving norms as an attempt at regaining dependable stability and purposeful direction. Ultimately then, I suggest the TCI is a common feature across the myriad of sites related to Technological Human Enhancement Advocacy: Simply put, this technologically centric worldview is a net-effect of various ongoing shifts in science, technology, global media and politics in recent years, as well as shifting epistemic dynamics of the twenty-first century. It represents an attempt to purposefully marry the material-factual with the ideational-possible: seamlessly combining real and imagined futures in a way which is reliably grounded in dependable knowledge-structures and symbolic narratives of the past, while simultaneously forward-oriented, affirmative and embracing of the unknown. Although TCI appears most pronounced in the practice of transhumanism – where it is acted out unashamedly in extreme, almost hyperbolic ways – the phenomena also mirrors broader topical discussions around the future of science, technology and human self-identity in the new millennium. As such, it is deserving of further study.

## 8.2 REFLECTIONS ON MULTI-SITED STUDY

This research project has used an ethnographically-inspired multi-sited approach to capture the symbolic-interpretive culture surrounding the prospect of technological human enhancement, principally as it is manifested through semiotic expressions – such as framing and narrative – arising in relation to the people, metaphor and practice of THEA. The study was designed with inspiration from the multi-sited approach towards ethnographic research, a dynamic and thoroughly engaged methodological strategy which has become popular within the field of STS in recent years. In line what Hess (2001) describes as the socio-political interests of so-called second wave STS ethnographers, I chose to deploy a multi-sited research strategy to examine how symbolic meanings or legitimating power relations are embedded within the cultures of surrounding advocacy for emerging forms of science and technology regarding human enhancement – and indeed how such fundamentally

undetermined techno-scientific matters might be both constructed and reconstructed by a range of actors on their own terms. On the whole, I feel this methodological choice was well made for a research area of this kind, and its novel use in this study has broadened the range of successful applications associated with multi-sited techniques, and has ultimately advanced methodological understandings in this area. In the interests of furthering understandings of the benefits and costs which might arise from the use of multi-sited study to examine social and political factors related to emerging science and technology, it is appropriate to offer some reflections on the use of this approach as it transpired in the context of my project.

### *Advantages to Multi-Sited Research Strategy*

Undoubtedly, the foremost advantage to this research strategy has been the practical and creative freedom afforded by such a broad-based, inclusive approach towards ethnographic type study, where it has been possible to gradually induce a theoretical frame based on the net-effect of a variety of inputs ranging from semi-structured observations, to other more engaged interactive forms of intervention, and symbolic discourse – drawn from across a range of both physical and virtual locations. This intentionally highly accommodating schema allowed me to pool anything and everything which I took to be of relevance in the interest of building a thoroughly detailed account of technological human enhancement advocacy. Not least then, the act of following the practice, metaphor and people granted me the opportunity to gain a truly multi-faceted appreciation of how THEA was carried out in a variety of quite substantially different settings, and indeed across a range of populations who might otherwise not be included within the same analytic frame. It is clear such a highly geographically vast and conceptually varied account of a transnational subcultural phenomenon such as transhumanism would simply not have been possible using conventional, single-sited research methods. Simply put, in this instance, I found the constant dynamism sanctioned within the act of following the practice was entirely appropriate and sympathetic to the fundamentally forward-looking, change-oriented premise which surrounds both transhumanism and THEA. In other words, the process of constantly shifting from location to location allowed me to focus on meaningfully comparing and contrasting the different manifest forms

of the practice, and with it ultimately issue broad-based judgements as to the integral performative features of THEA – those which appear to somehow ideationally bind otherwise disparate individuals and groups together across space and time. As I found Technological Human Enhancement Advocacy tends to a large part be a highly-embodied practice – indeed, with this feature often cited by respondents as a foremost benefit of ‘offline’ meet-up events/communities formed around the idea – this gave me the chance to move between a range of sites where THEA was enacted. Indeed, these initial sites – where I had identified the practice of THEA – frequently became a platform where I was introduced to, and ultimately came to follow, other additional stands of THEA manifested through both metaphor and its people.

Specifically then, the broadening of my research strategy and analytic scheme to accommodate following the metaphor/concept of THEA allowed me to make full use of the internet – a key technological enabler of the mobilization which led to the formation of early transhumanist movement – to trace the propagation of the idea across virtual spaces, and also work to integrate those eclectic advocacy efforts which appeared to share a level of strong conceptual overlap with the notion of THEA, but were comprised of entirely different practices. Such a horizontal conceptual tracking approach allowed me to develop an understanding of the overarching macro-level structural drivers and conditions which appeared to be directly tethered to the idea of technological human enhancement and its advocacy, and how the idea was instantiated in different formats and settings. Indeed, the early decision to attempt to track transhumanism in conceptual terms is also essentially how THEA came to be eventual formalised as a core focus for the research, an important turning point in the project overall – with my rationale behind this decision being that it would allow my analytic lens to encompass a much wider sphere of practices and people implicated in advocacy type efforts than those which may be captured by named relationship to the formal transhumanist descriptors alone. In other words, it was through this methodological choice to wade through the vast conceptual terrain associated with technological human enhancement advocacy that I came to realise, appreciate and ultimately adjust the framing of the project to reflect how transhumanism represents only one of a wider far more nebulous pro-science and technology culture, comprised of a range of THEA-inspired practices and people which include – but is clearly not limited to – transhumanism and transhumanists.

No doubt, this concern for broad-based structural causes behind the concept of THE advocacy enabled me to develop theory at a much higher, more all-encompassing, level than if I had been fixated on people and practices alone.

Despite the considerable merits of following the largely impersonal, unbounded components of THEA as a practice and concept, I also realise, upon reflection, that I was greatly rewarded by my choice to deliberately follow some of the human-actors who I found carrying forward the various schemes associated with THEA. In this sense, making close UK-based transhumanist connections early in the project and then actively following them across new and interesting sites internationally, which allowed me to observe first-hand how their advocacy led them to enter new uncharted, exploratory spaces and made them work – much like how I was through my research – to actively make sense of what they encountered. No doubt, the depth and intensity of this exploratory meaning-making was bolstered by the high-level of scientific/technical/academic/professional background held by those who I spent time with. In this respect, we became like fellow travellers on the road to actively understand THEA – sympathetic and analytically attuned to an often confusing vaguely defined field which was before us. As such, the relative impartiality of my apparently marginal outside perspective – and indeed also a professional background as a social scientist – was frequently welcomed as a kind of litmus test to gauge the social standing/legitimacy of the more elaborate forms of mobilisation we found being attempted in the human enhancement space.

By following the people who I found somehow actively invested in THE, it was possible to work to create and maintain a long-term level of rapport and closeness to my research subjects, which ultimately had the effect of facilitated a far deeper and personal understanding of their activities than I could have attained through following the practice alone. To be sure, the rich and detailed emotional accounts offered to me by those who I built relationships with, brought a kind of grounded 'human' dimension to the research, the likes of which would not have been available had I been simply studying the disembodied-dispersal and migration of an abstract practice/concept. I believe this purposeful combination of various engagements with those practices, concepts and people which I deemed necessary/relevant to further

my understanding of THEA is the essence of a *situational activism* – which is true to the spirit of multi-sited ethnography as originally put forward by Marcus (1995). In no small part, the significant scope of the study – which I take to be a foremost strength to the research – again came from my intentional theoretical decision, taking heed from Nadal & Maeder (2005) to restrict my ethnographic description to central concepts, and while omitting superfluous contextual details. This approach allowed me to issue *specified generalizations* in my final analysis, which were both grounded in my experiences, but also reflective of what I saw to be wider trends occurring across the spaces associated with THEA.

My multi-sited imaginary which was chiefly the social-political dimension to advocacy surrounding the notion of Science and Technology as a means for achieving human enhancement – I.e. the cultural meanings and legitimating power relations embedded within relationships with science and technology, rather than the knowledge production processes from which they are derived – proved to be an unexpectedly rich and largely as yet untapped vein of symbolic cultural meaning, the likes of which I could only tentatively begin to fully assimilate and formalise within the relatively limited confines of the PhD project. In this respect, my use of the social constructivist epistemic approach inspired by symbolic interactionism and framing theory while pursuing the ideal of methodological symmetry (Bloor, 1991: 176) – which principally began with the point of view of my informants – enabled me to gradually build my theoretical framework over the course of the research. Dealing with my observations and the spoken/written accounts offered to me by respondents without holding strong theoretical convictions from the outset – that is, besides a general interest in the actors and belief systems associated with THEA – enabled me to avoid the imposition of an artificial standard or model over the data, and instead build up a more intuitive frame of analysis as the study proceeded. This highly-dynamic inductive approach was of great benefit to the quality of the research overall, as after concluding my analysis I was satisfied that through the choices I made, I had dealt adequately enough (Amit, 2000) with the complexity which I encountered across my un-sited field (Cook, Laidlaw & Mair, 2009). Specifically, I felt I'd produced an account which in my own mind met the main objectives which I'd been working toward, namely: to tell the complicated story of THEA in a way which would be satisfying to the full extent of a prospective reader's curiosity, and

moreover would convince them of the merit and validity of the analysis (Marcus, 1998; Braun & Clarke, 2006). Ultimately, I believe this feat would not have been possible were it not for the great scope and freedom which multi-sidedness affords in pushing the principles of ethnography to its outermost limits. Despite these practical benefits, adoption of the multi-sited ethnographic type approach toward the study was not without its both challenges and costs. The more difficult and/or limiting aspects I encountered when attempting to use this methodology will now be recalled.

### *Challenges of Multi-Sited Research Strategy*

The highly liberal and inclusive epistemic bedrock of the project posed its challenges. Not least, the trade-off for operating with what might at first glance appear to be a relatively uninhibited, 'footloose and fancy free' epistemology attuned to interpreting a great range of symbolic, richly descriptive cues is the full-on, torrential experience of *mess* (Hine, 2007) which inevitably arrives after visiting even the smallest handful of field locations. No doubt inhabiting such a meaning-rich, apparently chaotic domain for a prolonged period is at risk of overwhelming the researcher, and with it also coming to paralyse the research process. Indeed, in my case I found my response to the principally unbounded and loose nature of both my field-site and object of study was to massively accelerate my production of data, ultimately leading to an eventual massive surplus of datum which then needed to be somehow unpacked and systematised retroactively. This was a laborious and angst-inducing process at times, given the limited time-frame of a PhD project. In this respect, true to methodological literature (i.e. Holstein, 1997), I found the final writing-up phase represented a fundamental stage of my thematic analysis, as the act of writing worked to further develop and cement the major research themes into a sufficiently coherent whole.

Put another way, the forced imposition of chapter-section minded structure based on the range of material gathered enabled me to effectively discern and formalise the major themes which had emerged across sites. In effect, patience, restraint and discipline was required to achieve the synthesizing, macro-level perspective necessary to section (and further sub-section) the analytic chapters which would



ultimately allow me to meet, in my own mind at least, the objective of the write-up for interpretive thematic analysis – to tell the complicated story of the data in a way which should convince the reader of the merit and validity of the analysis (Braun and Clarke, 2006). Another significantly challenging factor related to the above point is the considerable psychic weight of mounting personal-professional ambivalences borne throughout the study surrounding whether it, in fact, qualifies as *ethnographic enough* to carry the title ethnography. Eventually, by way of resolve, I satiated my conscience with the phrase ethnographically-inspired which allowed me to specify the main theoretical and conceptual impetus for the work, while also side-stepping the more prescriptive methodological tropes associated with the ethnographic tradition – strict adherence to which I believe would have considerably inhibited (and ultimately distorted) the organic flow of the research.

Also, the research area came to pose a handful of somewhat unanticipated ethical dilemmas variously stemming from the repeated invitation to ‘fully’ participate in the technological human enhancement centred lifeworld of those who I encountered. These unforeseen factors included the risk of causing bodily harm to myself through the invitation to partake in the use of largely untested, emerging technologies such as transcranial Direct-Current Stimulation (tDCS) or Magnetic Stimulation (TMS), and unregulated nootropic supplements. In effect, I found this threat was sufficiently well countered with minimal disruption to the research simply by a polite decline. Moreover though, besides this unanticipated level of personal bodily risk, I also found myself contending with broader, important legal-ethical professional considerations when dealing with hobbyist hacker-type respondents who shared reports of their work which fell into legal grey areas. For example, in one particularly noteworthy instance, over the course of a casual conversation in a London-based pub I learnt one respondent's online exploits independently researching so-called ‘hitman for hire’ contract killing services as advertised on darknet markets had apparently triggered a serious now ongoing police investigation into organised crime – and was potentially pending international arrests. Having given my word that I would keep this information to myself, for the time being, it was unclear to what extent, if at all, I would be able to proceed to talk openly about the case – which was steeped in much surreal bizarreness – with friends, family and work colleagues. Thankfully, a few weeks later the respondent contacted a journalist

at a major UK newspaper who ran the story, and I was then given the green light to disclose/discuss it as I wished.

Other issues related to consent and information/data-sharing arose during the research. For example, similarly, in the early stages of the project, I reached out to contact a Californian-based computer engineer via email to ask about the history behind some digital copies of early editions of extropy magazine which I'd found – otherwise unpublished – hosted on their personal website. I learned these were apparently leaked documents, procured using a USB thumb-drive while “hanging out” at Max More's house. The person told me they couldn't exactly recall the extent to which Max had consented to the full release of this data. This status prompted me to reflect on whether it was ethical to reproduce any of this content in my study. In the end, I opted to include the material in my analysis and reference it in my research, as it offered a rich source of early transhumanist ideas which, although quite obscure, was already being digitally circulated in the public domain, and thus freely accessible. To be sure, the highly fringe interests, rebellious anti-authoritarian impulses and generally high-level of technical proficiency apparently shared by many THE advocates meant some of the practices I found associated with THEA flirted precariously near the outermost bounds of social-legal-ethical acceptability – forcing me, as an interested researcher, to also seriously contend with these matters in turn. Equally, I faced issues of accountability during the study, both personal accountability to my research subjects, and to my peers in seeking to uphold the highest ethical-professional standards when conducting the project. These competing interests were not always easy to balance, as some of my circumstantial activism (Marcus, 1995) led me into complex relationships with THE advocates and advocacy groups. For example, my attendance at RAAD Fest was at least in part facilitated by the press-pass which I'd been issued by the organisers, and while I'd given them full-disclosure of my status as an academic researcher, never the less I felt conflicted by the desire to report back honestly on my observations at the event – which were largely critical – for the sake of professional integrity, versus a wish to give platform and authentic voice to an organization/community which had entrusted me to do so.

Another substantial constrictive factor, as recognised in the *Methods* chapter, which profoundly shaped the project is the extent to which most data capture occurred at

settings within the US and UK. Obviously, this raises the open question of the relevance of transhumanist ideas across the rest of the world: Ultimately, I must concede that it remains outside the scope of this study to form a nuanced view on the subject. However, for what it's worth, I will offer the following personal reflections on the geographical bias I encountered during the study. Broadly speaking, the sites I visited in North America were often commercially focused, and appeared to reflect the cultural norms of consumption, and performance/aesthetic-based notions of biomedical enhancement found in U.S markets (Clarke et al, 2010: chp 10-13). This commercial-slant was apparent in direct-to-consumer healthcare marketing exercises such as *RAAD Fest*, but also across more casual hobbyist-type settings such as *Futurism NYC* meet-ups, which were typically hosted inside corporate/office spaces out-of-hours. My feeling is the corporate nature of such sites acted as powerful framing mechanism, the likes of which tended to inevitably steer the discussion of technological human enhancement toward functional terms. By contrast, most sites I visited across the UK were associated with university institutions – i.e. Cambridge, UCL, LSE – and advocacy efforts appeared to, overall, temper the scale/level of ambitions/expectations assigned to technology, or at least appear mindful of ambivalences surrounding the prospective enhancements in question. Moreover, actors across these locations appeared generally more attuned to the role of regulation and ethics, the broader-based social ramifications of the enhancement agenda. To be sure, the above clearly speaks to the relatively narrow range of institutional settings which happened to be visited in either locale, which were admittedly reached by chance more so than design. This then a highly crude characterisation of the geographical bias observed between the two major nations visited. Nevertheless, it is a relevant contextual feature to mention in the interest of situating the research findings. Undoubtedly the most significant advantage was the dynamic and accommodating quality which multi-sitedness brought. Despite the corresponding methodological 'costs' which came in the form of certain analytic challenges – as well as standard power-based interpersonal (i.e. researcher vs research subjects) tensions associated with an ethnographic study – on balance, I feel the multi-sited strategy has offered much in the service of advancing understanding of the research topic. While the turbulences I encountered mentioned above are standard research hurdles expected in the execution of qualitative-interpretative study, other challenges and limitations were related to practical factors specific to

this project, which may be countered by supplementary work. These future research possibilities will now be discussed.

### 8.3 DIRECTIONS FOR FURTHER RESEARCH

Simply put, this study has addressed a significant dearth in academic knowledge and understanding surrounding the social, cultural and psychological constitution of Technological Human Enhancement Advocacy. In the spirit of supporting a yet inceptive area of social-scientific concern which is likely to become of much interest in the years to come, it is appropriate to offer some recommendations on how further meaningful research could be conducted in this space. I suggest there are at least two emerging theoretical-conceptual veins related to the Techno-Centric Imagination which would benefit from closer investigation: *Ideational Conviction Mapping* and *Institutional Steering Mechanisms*:

#### *Ideational Conviction Mapping*

As my findings have demonstrated, it is clear there is a fundamentally future-oriented ideational quality to advocacy efforts surrounding technological human enhancement. Simply put, this state of ideational projection centres around the assumed power and possibility inscribed within science and technology as a vehicle for radical transformation of both humanity and the natural world. Moreover, from the findings presented, it is evident the level of speculative belief – or ‘faith’ – advocates have toward the credibility of this idea is highly variable, occurring to different extents across both individuals and advocacy groupings. Accordingly, as a continuation of this research into the emotional-motivational structures which inform technological human enhancement advocacy, it would be relevant to examine factors which might influence the nature and extent of technological conviction held by THE advocates – say, for instance how techno-optimism can be taken to contrast with techno-determinism – in more detail. Anecdotally speaking, my observations suggested the variances in the level of conviction which respondents displayed toward the possibility of technological human enhancement appeared in some sense

correlated to their affinity/formal support for named movements, with post-humanists showing the greatest scepticism toward the prospect of THE.

In this sense, some critical posthumanists I spoke with who appeared to take intellectual influence from post-structuralism – such as Francesca Ferrando – appeared to subvert the techno-centric primacy of technology associated with transhumanism. That said, while arguably lacking the deterministic conviction associated with transhumanists, never the less the concept of human co-evolution with technology represented a significant pillar in their worldview, albeit apparently subject to some qualifiers. Although an interesting phenomenon which I noted over the course of the research, given my focus on theorising the more linear, one-dimensional accounts of technological human enhancement, it was not possible to unpack the nuances of posthumanist views in detail within the limiting confines of this study. I, therefore, suggest it is relevant for further scholarship to consider how highly techno-centric views might be challenged and indeed re-negotiated – or otherwise – in response to other more holistic, multi-dimensional accounts of the complex circumstances surrounding emerging science and technology, of the kind associated with the so-called critical posthumanist intellectual tradition. Given the highly subjective value-laden character of beliefs around the feasibility, desirability or indeed inevitability of technologically-based human enhancement in the future, taking a cue from this project, further qualitative interview-based study would be most amenable to deconstructing advocates convictions toward the prospect of THE.

Moreover then, in addition to further investigation geared toward exploring THE conviction levels by reference to intellectual trends reflected in self-identification under named movements, it is also relevant to consider how levels of technological enhancement conviction are expressed in relation to the initial typology of THE advocates sketched out in this thesis – i.e. Fantasists, Hobbyists, Consumers, Specialists – in order to gain a better understanding of these proposed ideal types. Dissecting both the level and type of convictions held by advocates in this way – and attempting to account for the character and origins of beliefs surrounding the power and possibility of technological human enhancement – is highly relevant as it might reveal the drivers, qualifiers and limiting factors involved in mitigating persons support and enthusiasm for the prospect of THE, and how such positions translate

into different forms of advocacy practices and advocacy groupings. Other anecdotal evidence over the course of the research suggests conviction level is also somehow spatially determined, as generally speaking, forms of THE advocacy I encountered was most self-assured in the United States, where those advocates I spoke with typically had the least qualifiers around their endorsement of the prospect of human technological enhancement. Of course, intuitive reading of this field observation would be that levels of support for the idea of THE – ranging from fantastical enthusiasm, bemused scepticism to cynicism and outright hostility – is closely tied to cultural factors which manifest differently across various settings.

Simply put, as this research has tentatively demonstrated, levels of conviction – and indeed the corresponding normative claims – associated with technological human enhancement advocacy exist on a spectrum. If, as New Social Movement Theory suggests, we consider the behaviour of THE advocates to be the product of both rational choices and emotional-psychological drivers, it is reasonable to expect that each advocate works to internalise narratives surrounding the idea of technological transcendence, gauge the likelihood of realising THE-type ambitions, and then use this initial judgement to determine the nature and extent of their involvement with THEA. While working well to formalise the broad-based direction of travel associated with enhancement advocacy across the range of settings encountered, this study has not examined the technical/social/political terms which might be evoked to qualify such levels of support in detail, would well be influenced by circumstantially specific factors. No doubt, this project's dearth of understanding in this area illustrates the tension between the scope of multi vs single sited ethnographic studies and raises the question of how the two might be deployed in mutually supportive ways for the betterment of understanding Technological Human Enhancement advocacy. In summary, my preliminary field observations indicated that ideational variances appeared to be both ideologically and at least partially geo-spatially determined – with highly deterministic renderings of technology appearing especially predominant on the West Coast of the United States: It is of relevance to ascertain how/why this is the case in more detail. The above also clearly raises the question of how sizable macro-level social, cultural and institutional structures might somehow influence the eventual format and character of technological interest and

support across advocate populations. This point leads to the second area for further research: *Institutional Steering Mechanisms*.

### *Institutional Steering Mechanisms?*

This project has dealt predominantly with the perspectives of individuals loosely clustered around advocacy for THEA, as reached through multi-locational, active construction of a non-specially determined unsited field. As a direct consequence of this research strategy, the locational specificity and institutional culture and norms I encountered were given secondary importance in favour of those comparatively unbounded features of THEA which had a trans-locational quality. In other words, this study commenced in the interest of employing a deliberately dynamic approach which privileged the movement of ideas over their stasis. To be sure, as referred to in the methodological chapter, such a horizontal strategy characterised by moving across and between sites can be seen to lack the vertical depth of attention which might be associated with conventional single-sited ethnographic practices. Besides from levels and types of advocates ideational convictions – which we can speculate may be both ideologically and spatially influenced – detailed in the previous section, another area of considerable interest which appears to have been inhibited by the multi-sited research technique is the study of institutional culture. The initial findings of this project suggest that institutions have a significant level of influence upon the format and character of THE advocacy, with such social forms potentially working to shape the specific hopes, dreams and aspirations of THE advocates. In this sense, while the study offered some moderate passing exploration of the role of institutions (for example, *People Unlimited*, *The Church of Perpetual Life*), my exposure to these organisations was relatively fleeting and limited owing to the dynamic nature of my multi-sited project design.

As such, it would be beneficial to conduct further in-depth analysis of the role that key, principally embodied institutions – such as the *Singularity University*, *SENS Research Foundation*, or other bricks and mortar sites – play in creating, distributing and actively re-enforcing TCI. I suggest research of this kind could be attempted using more 'traditional' (i.e. single site) ethnographic approach to build a detailed,

circumstantially specific, account of pro-science and technology institutional culture. In this respect, gaining access to, and proceeding to spend a prolonged period of time within a particular institutional locale would allow researchers to gain a high-level appreciation of internal culture, and equally build a detailed understanding of how mechanisms might work to effectively steer THE advocacy along certain pathways depending on strategic objectives of the institution. Although such single-sited efforts would be unable to achieve the broad-based breadth and lateral scope of multi-sited analysis, they would also potentially stand to gain a level of vertical depth and grounding which critics could allege this study is lacking. To this end, longer-term single sited ethnographic efforts could purposefully supplement and combine with multi-sited analyses to build a more complete picture of how technological human enhancement advocacy is played out in practice.

In so doing, this circumstantially specific quality could, at least in principle, also allow for research findings to have more prescriptive, policy-oriented outcomes. By turning attention toward the extent to which TCI may be created and re-enforced via institutional norms and practices, it would be possible for researchers to critique the social-normative constitution of these settings, and issue recommendations as to how such entities might be adapted to better serve the public interests. For instance, one obvious related centre of interest in this regard is the media-based public outreach efforts associated with scientific and technological research institutions, which appears to be a key driver in the formation of techno-centred worldviews. This study has shown how new media – particular digital ICT – is closely implicated in the construction of narratives surrounding THE and THEA, as such the institutions involved in disseminating representations of emerging technologies related to human-enhancement are of interest. It is reasonable to expect ethnographic-type participant observational research in these settings could constructively feed into ongoing discourses surrounding the complex value-laden interface between science, media and publics, and how imaginative science fictional media texts collide with more nominally fact-based official science communications as both circulate simultaneously in the contemporary public domain. In short, as such yet loosely-defined technical possibilities come to be institutionally mediated through both elaborate media representations and science communication, the Techno-centred Imagination provides a useful analytic tool to mark the apparently fluid nexus



between science fiction and science fact in the face of the rapidly increasing complexity and publicity of science in the twenty-first century.

## FINAL CONCLUSIONS

This thesis has, through its formalisation of the Techno-centred Imagination (TCI), contributed the first empirically-driven exploration into the various demographic, intersubjective, programmatic, political and existential factors associated with Technological Human Enhancement Advocacy. The project has worked to explore the methodological suitability of – and indeed tested the limits for – multi-sited participant observation-type study in the analysis of trans-locational, subcultures formed around human enhancement via technology. Ultimately, taking inspiration from this technique has enabled me to elicit the various symbolic-interpretive tropes which travel alongside different forms of advocacy, as observed across a diverse range of field locations, and reported to myself over the course of verbal and written exchanges with those who populate the spaces associated with THE and THEA. Specifically, the study has detailed the social and cultural values held by those who constitute advocacy groups organised around the notion of human technological enhancement, the variety and scope of their various attempted technical and social mobilisations around this ideal, and recalled the complex political perspectives, and existential assumptions which it found associated with THEA. In sum, despite much gesturing towards an imminent technological revolution and radical change set to somehow massively redefine human existence – be it born from intentional, strategic convergence between emerging technologies, or more spontaneously, through some shock disruption – the advocacy efforts I encountered relied somewhat paradoxically upon a set of familiar, action-orienting narrative tropes, assembled through semiotic reference to deep-seeded normative ideals forged long ago, deep in humanity's past.

Transhumanists – among the most unabashed of technological human enhancement advocates – of different political persuasions are unified by their fundamentally life-affirming orientation: From this starting point, they share an ambition to surpass any and all obstacles standing in the way of actualising what they believe is an infinite potential which resides, as yet only partially realised, within human beings. To the

informed observer, this latest spate of techno-centred activism then surely rings of the 1990's technological utopianism which characterised the arrival of the world-wide-web, only given a Web 2.0 gloss through the organising power of social networks, and fleshed-out via wiki-media and other user-generated content. While the contemporary impulses for technological transcendence appear animated by the same root-assumptions surrounding the possibility – and indeed desirability – of human-technical mastery over the natural world, such desires have been updated in line with scientific-technical developments which have unfolded in the interim. Clearly, some have taken these late twentieth-century visions for the power and possibility of technology to new increasingly fine-grained, personally internalised heights, apparently bolstered by those totemic public displays of apparent scientific capability which have elapsed in the time since – not least the sequencing of the human genome in 2003. In this sense, much like how the initial extropian boom which brought the transhumanist movement into existence was apparently media-inspired through the arrival of an increasingly scientifically self-reflexive populous – not just thanks to the propagation of the Science Fiction genre, but also the popular science writings of Drexler et al. – in more recent years, other structural drivers have stepped-in to reshape both the format and terms of present-day THE advocacy. These include a changing political economy of science – which has seen a significant migration of resources from the public to private sector – and wider epistemic shifts which have significantly blurred conventional distinctions between science vs non-science and expert vs laity, as well as information vs entertainment:

Ultimately, I suggest the net-effect following these shifting tectonic disks of change is the proliferation of an array of THE advocate communities motivated by an array of both personal and economic interests. In ideational terms, the overarching ambient bridge across such groups is one of feeling – at least on a psychic-emotional level – counter-culturally energised and info-technologically empowered, more so than ever before, to meet the challenges facing humanity in the twenty-first century. Yet, at the same time, and on a pragmatic level, also lacking some measure of both the technical capabilities and social-cultural cohesion necessary to make good on these ambitions in the context of liberal democratic society. Fundamentally then, any social-political-philosophical mobilisations which principally foregrounds technological human enhancement risks falling into an almost *Deus ex Machina* solutionism – or

assigning primacy to technology at the neglect of other important broader-based societal considerations surrounding the embeddedness to their technical projects. This significant programmatic glitch is exacerbated further still as many advocates I encountered showed a tendency to see technology through a highly individualistic lens – a yet unresolved hangover from Enlightenment political philosophy.

Central to the construction of these problems – and potentially resolving them for the better realisation of THEA efforts, and indeed the social-cultural domestication of science and technology more broadly – is the use of symbolism and narrative. It is through purposive use of compelling narrative and semiotic constructs that THEA is talked into being a claim which – albeit alongside technical, institutional, economic factors – is true for the advancement of science and technology more generally. In the case of transhumanism, the movements activist sympathisers attempt to add credibility to its elaborate schemes by aligning them with major tropes associated with the humanist tradition, as well as legitimate their principle ambitions through evoking clinical-technical language, and importing concepts drawn from the natural sciences. Indeed, THE advocates and activists appear to possess a remarkably high-level of formal training or literacy in the fields in question. Yet it would also seem – perhaps due to the normative-existential vacuum left in the wake of scientific materialism, and economic factors in the market based post-cold war political economy – professionals with such technical background are faced with the temptation to extrapolate their future-oriented claims built on this specialist knowledge out exponentially, embarking upon far more imaginative and indulgent flights of fancy than an otherwise sober, measured and ultimately self-restrained reading of current evidence around prospective THE modalities would permit.

In consumer-focused settings like RAAD, such relatively unrestrained market-led extrapolations pool together, forming a speculative, utopian bubble which whips-up excitement and enthusiasm from an affluent, dissident-minded public – who latch onto the emancipatory promise inscribed within these technological visions, which straddle today's ever-porous boundary between science fiction and science fact.

Against this backdrop, the philosophical substructure of transhumanism takes the Nietzschean ideal of overcoming to its most extreme, venerating both autonomous self-direction, and the transcendence over suffering through the faculty of mind.

Notwithstanding the strong individualist sentiment which surrounds transhumanist culture, some more socially-minded of THE activists then also notably attempt – albeit somewhat fitfully, and with a yet indeterminate level success – to use the assumed neutrality of scientific-objective principles to reflexively minimise the ill-effects of the cumbersome and limiting both known-unknowns and unknown-unknowns presented by human cognitive biases. Ultimately, they believe this will allow the design and execution of some deliberate, tactical scientific-technical response to the question of human limitation, and with it usher-forth the possibility to side-step those associated, self-created mounting planetary-existential threats which continue to mark the strangeness of our days. While transhumanist political perspectives echo conventional ‘left’ (i.e. collectivist) and ‘right’ (i.e. individualist) divisions, all such approaches revere the assumed material-actualising potential of technology under rational-empirical ideals. Transhumanism – along with its parent concept technological human enhancement advocacy – resembles a sophisticated form of social movement activity combining both self-identitarian angst and strategic ambition, the likes of which are raised both the biological (i.e. material) and cultural (i.e. immaterial/symbolic) level. It can then be argued to represent, maybe even exemplify, the rising tensions of late-modern post-industrial society. These preliminary observations will be of relevance to those concerned by the so-called ‘new’ social movements formed around the promise of emerging science and technology in the contemporary period, and those interested in schemes of both framing and narrative evoked to justify and continually re-enforce the largely – though not exclusively – utopian thinking associated with the technological human enhancement agenda. It is hoped these findings will help prepare interested scholars to keep pace as these rich and highly novel social forms – and indeed the complex semiotics underlying them – continue to circulate and evolve in the years to come.

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# Appendix I:

## Generic Recruitment Template

Mr. James M MacFarlane  
Department of Sociology  
University of Warwick  
Coventry CV4 8UW UK  
T +44 (0)24 7652 3147  
M +44 (0)78 5860 6050

[Date]

Dear [Potential Respondent]

I trust this message finds you well. I'm writing to introduce myself as a researcher in Science and Technology Studies at the University of Warwick, UK. My PhD project — supervised by Professor Steve Fuller — is a multi-sited ethnography examining cultures formed around human technological enhancement in the 21st century.

I recognize you to be someone actively engaged in this space, and would like to offer an invitation to be involved in this study. This participation would entail us having some form of semi-structured discussion around the topic of human technological enhancement. The process should take around 45-60 minutes, and would then — with your approval — be used to inform my research.

I will gladly travel and meet at your convenience to hold a discussion of this kind. Alternatively, I'm also reachable on Skype for this purpose (ID: 'JM.MacFarlane'), or the exchange can be conducted over email if you'd prefer. Please let me know how best we should proceed on this front. I look forward to hearing your thoughts.

Sincerely,

**Mr. James M MacFarlane**

**PhD Candidate, Department of Sociology**

# Appendix II:

## Participant Information

### **PhD Sociology Research: Participant Information Sheet**

#### **Introduction**

I am a researcher in Science and Technology Studies from the University of Warwick (UK) currently undertaking a PhD study within the Department of Sociology. My supervisors are Professor Steve Fuller and Amy Hinterberger.

#### **What is the purpose of the study?**

The study seeks to explore human technological enhancement from a sociological perspective. The research will consider how the key themes of identity, purpose, boundaries, politics and belief relate to emerging technologies. You have been invited to participate as you have been identified as someone actively engaged in this space.

#### **How will the study be conducted?**

Participation in the study will assume one of two formats: either through a semi-structured interview (typically lasting 45-60 minutes) or an electronic survey (typically taking 30-45 minutes). The data derived from your responses to key questions will be used to inform my thesis.

#### **What are the possible disadvantages or risks of taking part?**

There are no known risks or disadvantages of taking part, as every effort will be made to protect your confidentiality, unless you explicitly agree to your name being mentioned in publications arising from the research. In the case of interviews, you will be sent a transcript of the interview before the analysis to allow you to ensure that you have not been misrepresented.

#### **What are the possible benefits of taking part?**

In taking part you will be able to reflect meaningfully on the nature of human technological enhancement in the twenty-first century. You will also actively contribute towards a new area of sociological inquiry which is likely to become increasingly important in the years to follow.

**What happens when the research study stops?**

After the thesis has been produced it will be submitted for the award of Doctor of Philosophy. Relevant results will be presented at academic conferences and published in academic journals. Findings of the study will also be communicated to you via email.

**Do I have to take part in this research?**

You are under no obligation to take part in this research. You can withdraw at any time without giving a reason and there will be no adverse consequences if you do so.

**What if there is a problem?**

Any complaint or concern about any aspect of the way you have been dealt with during the course of the study will be addressed; please contact Janet Smith (T: +44 (0) 24765 23147 E: [Janet.Smith@warwick.ac.uk](mailto:Janet.Smith@warwick.ac.uk) ).

**Will my taking part in the study be kept confidential?**

All of the information you give will be anonymized so that those reading reports from the research will not know who has contributed to it, unless you explicitly agree that your name may be made public. Nobody other than the principal investigator will have access to the data, which will be saved securely on password-protected computers and stored securely for 10 years in accordance with the Data Protection Act 1998.

**Contact details of the researcher:**

Principal Investigator	Academic Advisors
<p><b>James M MacFarlane</b></p> <p>Department of Sociology University of Warwick Coventry CV4 7AL United Kingdom</p> <p>E: <a href="mailto:J.MacFarlane@warwick.ac.uk">J.MacFarlane@warwick.ac.uk</a> T: (+44) 7858 606050 [UK Mobile] T: +1 (619) 751-0226 [US Cell]</p>	<p><b>Steve Fuller:</b> <a href="mailto:S.W.Fuller@warwick.ac.uk">S.W.Fuller@warwick.ac.uk</a></p> <p><b>Amy Hinterberger:</b> <a href="mailto:A.Hinterberger@warwick.ac.uk">A.Hinterberger@warwick.ac.uk</a></p>

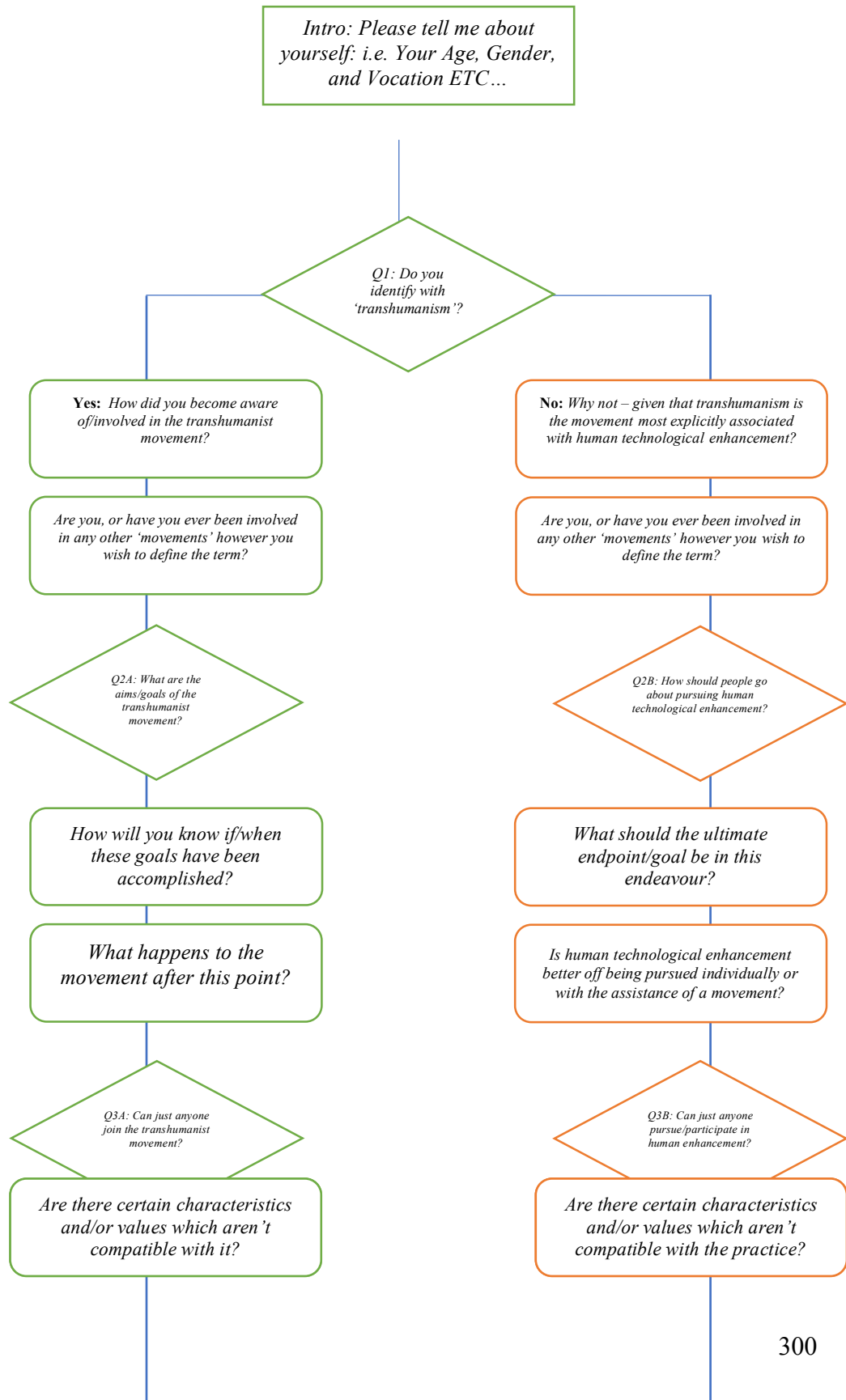
**Who has reviewed the project?**

The study has been ethically reviewed and received a favourable opinion from two independent academic researchers assigned by the University of Warwick's Department of Sociology.

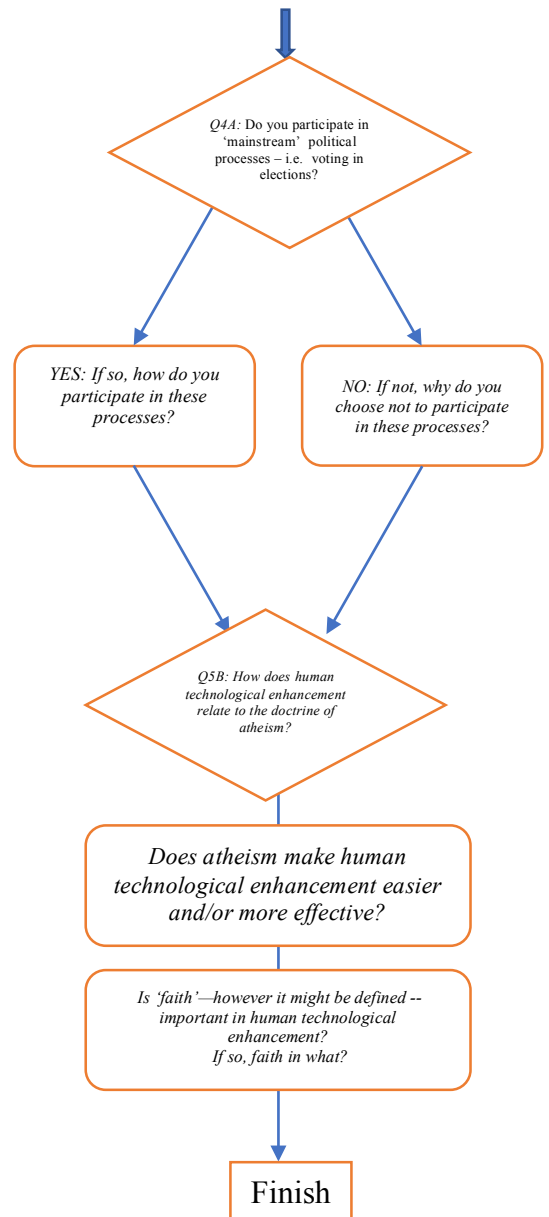
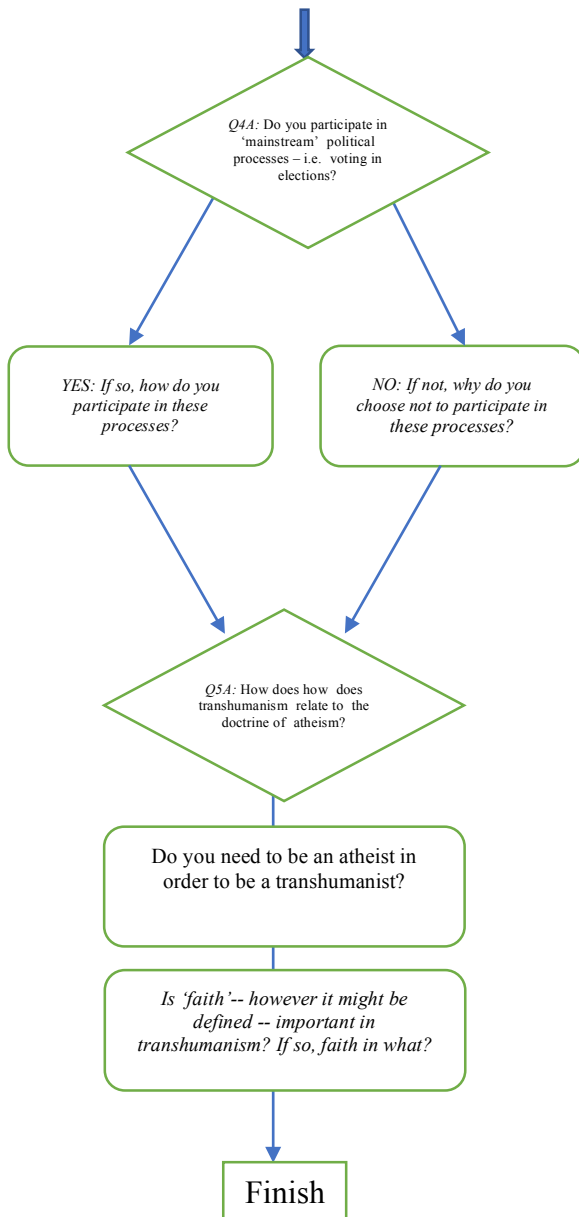
**Thank you for taking the time to read this information sheet.**

# Appendix III: THEA Interview Schedule

## Interview Schedule P1:



**Interview Schedule (Continued) P2:**



# Appendix III: THEA Survey

## **Social Dimension(s) to Human Technological Enhancement Survey**

The following is a survey designed to capture your perspective on a set of issues associated with human technological enhancement. You have been selected to participate in this study as somebody who is actively involved in this space. The estimated completion time for this form is 30-45 minutes.

***Participant name:***            ***Email address:***

At this point it is helpful for you to provide some bibliographic information if you are comfortable doing so, for example your age, gender and vocation etc. Please use the box below to describe yourself:

***Bio:***

***i) Do you identify with ‘transhumanism’? If ‘Yes’ go to question ii, if ‘No’ go to question iii.***

Yes             No

***ii) YES: How did you become aware of/involved in the transhumanist movement?***

***iii) NO: Why don’t you identify with transhumanism – given that it is the movement most explicitly associated with human technological enhancement?***

iv) *Are you, or have you ever been involved in any other ‘movements’ however you wish to define the term?*

*If you answered ‘YES’ to question i) please complete **Survey A** only on page 2.*

*If you answered ‘NO’ please complete **Survey B** only on page 3.*

*If you answered ‘YES’ to question i) please complete **Survey A** only on page 2.*

*If you answered ‘NO’ please complete **Survey B** only on page 3.*

### **Survey A: Transhumanism**

- 1) *What do you consider to be the main aims/goals of the transhumanist movement?*
  
- 2) *How do you think we’ll know once these aims/goals have been accomplished?*
  
- 3) *What do you think will happen to the transhumanist movement once its aims/goals have been accomplished?*
  
- 4) *Is transhumanism an open movement for everybody, or are there certain characteristics or values that transhumanists need to possess/uphold?*
  
- 5) *How, if at all, does your transhumanism affect your attitude to mainstream politics?*



6) *How, if at all, would you say transhumanism relates to matters of faith?*

Please tick to confirm you've read and completed the affixed 'Consent form for Participants':

Yes

End of questions.

Thank you for taking the time to complete this survey.

*If you answered 'YES' to question i) please complete **Survey A** only on page 2.*

*If you answered 'NO' please complete **Survey B** only on page 3.*

### **Survey B: Human Technological Enhancement**

- 1) *How do you think we ought to pursue human technological enhancement?*
  
- 2) *Are there any defining characteristics of the people who should be involved in either the research or the application of human technological enhancement?*
  
- 3) *What, if any, is the relevance of mainstream politics to human technological enhancement?*

4) *How, if at all, would you say human technological enhancement relates to matters of faith?*

Please tick to confirm you've read and completed the affixed 'Consent form for Participants':

Yes

End of questions.

Thank you for taking the time to complete this survey.

# Appendix V:

## Consent Form for Participants

### **Social Dimension to Human Technological Enhancement Research Project**

This project is research for the award of PhD Sociology and is designed to investigate social attitudes and values towards human technological enhancement in the twenty first century. For queries or updates on the project, please contact James MacFarlane at the Department of Sociology at the University of Warwick by email (j.macfarlane@warwick.ac.uk) or by phone (+44(0)7858 606050, +44 (0)2476 523147 - Departmental Office).

### **Consent to Participation**

I agree to take part in the research project specified above and I have had the project explained to me.

1. I agree to be interviewed by the researcher.  Yes  No  N/A
2. I agree to allow the interview to be audio-taped.  Yes  No  N/A
3. I agree to make myself available for further contact if required.  Yes  No

**and**

4. I understand that my participation is voluntary, that I can choose not to participate in part or all of the project, and that I can withdraw at any stage of the project without being penalised or disadvantaged in any way.

**and**

5. I understand that any data that the researcher extracts from the interviews, focus groups and surveys for use in published findings will not, unless I explicitly agree otherwise below, contain names or identifying characteristics.

6. I agree to allow my name and/or identifying characteristics to be disclosed in publications related to this research.  Yes  No

**and**

6. I understand that data from the interviews, focus groups, and surveys will be kept in a secure storage and accessible to the researcher only.

**and**

7. I have been given a copy of this consent form.

**Participant's name:**

**Signature:**

**Date:**

**Principal Investigator's name:**

**Signature:**

**Date:**