

# ***Virtuality & Humanity***

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## **Introduction**

### **The Book's Underlying Purpose and Thesis**

Virtuality. A word bandied about today by critics, proponents and neutral analysts of the Post-Modern / Post-Materialist / Digital / Information / Communications Era. Moreover, the academic and social pundits dealing in the terms "virtual" and "virtuality" come from sundry disciplines far and wide: computers; anthropology; psychology; literature, cinema and other arts; economics; physics; etc – and especially the field of new media.

It is clear that something is afoot, and not just in the world of cyberspace. Popular culture, especially, is usually a good barometer of the latest concerns, so that *Matrix* (the trilogy) and *Avatar* (a decade later), to mention but the most popular recent films dealing with virtuality, indicate something significant is going on. But how widespread is the phenomenon of virtuality itself? How important or intrinsic is it to modern life? Is it in any way revolutionary, or just mildly different from what transpired in the past? Or perhaps virtuality is an updated continuation of certain longstanding phenomena – that is, old wine in new bottles?

This book attempts to answer these questions and several others related to virtuality such as how to define the term, and what functions might it serve. In the process, it tries to place virtuality in its "proper" social and historical perspective, one that turns out to be very wide indeed. Consequently, I expect the main theses to be somewhat controversial -- misunderstood or even purposely misconstrued. Therefore, I will offer a bold-faced disclaimer immediately after presenting the book's central

arguments (those that I feel have a "strong" foundation of evidence are marked "S", while weaker ones are marked "W"):

1. Virtuality has been part of the human condition for as long as we can trace back our *Homo Sapiens'* ancestry (**S**).
2. This is because virtuality is intrinsic to humanity; indeed, it is one of the ways we can distinguish humans from other living creatures on Earth (**S**).
3. As a result of this proclivity, the course of human history can be described as a constant attempt (although not necessarily a pre-determined, linear, process) to widen the virtual experience – both in the number of areas of life as well as in the depth/richness of the virtual experience itself (**W**).
4. Overall, virtuality is not harmful but quite beneficial – otherwise humans as a general (and perhaps universal) rule would not engage in it to the extent that they have and continue to do with such gusto (**S**).
5. The modern era -- roughly post-1800, with important sources prior to that -- has been witness to a significant leap in virtuality, expanding ever faster over the past 200 years, in large part for technological reasons (**S**).

Nonetheless, **this is not to argue that all types of virtuality are constructive or beneficial**, and I certainly do not claim that the end of this historical process will be a Matrix-like 24/7 connection to a Virtual Reality machine. Of course, an additional interesting question (discussed at the end of this book), is whether there exists a *maximum* amount of virtual experience that is "natural" or "beneficial" to humans.

While the book's thesis, or at least a few of its sub-theses, may raise some eyebrows, the overall thrust is deeply conservative. I am not arguing here that a radical

shift has recently occurred in human experience or sensibility but rather that our virtual sensibility has very gradually evolved and expanded, quantitatively becoming a central component of human endeavor. That the past 200 years or so have seen a gradual acceleration in virtuality is also not a very radical idea, for it has gone hand in hand, i.e. influencing and being influenced by, scientific and technological developments that have been well documented by others.

This, then, is what is new in the present book: its basic thesis goes against the grain of many contemporary analyses and commentaries regarding virtuality. Their general approach is comprised of two parts: descriptive and prescriptive. On the one hand, the vast majority of pundits and even serious researchers view this phenomenon as something quite modern, i.e. stemming from the influx of electronic media and especially the computer revolution (Morse, 1998). On the other hand, while there are some differences of opinion regarding the effects of virtuality, many (and perhaps most) analysts tend to decry the phenomenon as a whole, or important aspects of it, pointing out its detrimental effects on the individual specifically and society in general.

The following are a representative sample of research report quotations (not taken out of context)<sup>1</sup> from what can be loosely called the anti-virtuality / virtuality-skepticism camp, comprised of scholars and serious social pundits; these are followed by several headlines or quotes from the mainstream press, clearly *not* yellow journalism sources. In some cases, the term “virtuality” itself is not employed but rather “internet”, “cyberspace” or other virtual phenomena/media are used as stand-ins:

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<sup>1</sup> Sandywell (2006) offers a comprehensive discussion of the dystopian approach to cyberspace in historical perspective regarding previous new media: "As with earlier information revolutions, the most extreme manifestations of cyberfear are articulated around metaphors of boundary-dissolving threats, intrusive alterities, and existential ambivalences created by the erosion of binary distinctions and hierarchies that are assumed to be constitutive principles of everyday life" (40).

## SCHOLARLY RESEARCH REPORTS AND SERIOUS SOCIAL ANALYSIS

*"[T]he internet creates a vast illusion that the physical, social world of interacting minds and hearts does not exist... . [There is a] connection between the rise of the Internet and the accelerating blur of truth and falsity in culture... . [T]he internet transvalues all experience into commercial experience" (Siegel, 2008: 17; 25; 60).*

*"... the modern infosphere. People who skillfully manipulate today's fragmented modern media landscape can dissemble, distort, exaggerate, fake – essentially they can lie – to more people, more effectively, than ever before" (Manjoo, 2008: 14-15).*

*"The speed and force of contemporary virtualization are so great that they exile beings and their attendant knowledge, alienate them from their identity, skills, and homeland" (Levy, 1998: 186).*

*"It's an unreal universe, a soluble tissue of nothingness. While the Internet beckons brightly, seductively flashing an icon of knowledge-as-power, this nonplace lures us to surrender our time on earth. A poor substitute it is, this virtual reality where frustration is legion and where – in the holy names of Education and Progress – important aspects of human interactions are relentlessly devalued" (Stoll, 1995: 4).*

*"Anonymous blog comments, vapid video pranks, and lightweight mashups may seem trivial and harmless, but as a whole, this widespread practice of fragmentary, impersonal communication has demeaned interpersonal interaction... .*

*Communication is now often experienced as a superhuman phenomenon that towers above individuals. A new generation has come of age with a reduced expectation of what a person can be, and of who each person might become... .*

*The deep meaning of personhood is being reduced by illusions of bits. Since people will be inexorably connecting to one another through computers from here on out, we must find an alternative” (Lanier, 2010: 4; 20).*

*“One of the extremely painful lessons of our time, I’m convinced, will be that the virtual is not an adequate substitute for the real. It will be painful because the notion of virtuality has become a psychological crutch for a culture that is recklessly destructive of real places, real experiences, real relationships with real people, and real notions of purposeful, decent behavior” (Kunstler, 2010).*

***“Thanks to technology, people have never been more connected--or more alienated. ...what people mostly want from public space is to be alone with their personal networks. It is good to come together physically, but it is more important to stay tethered to the people who define one's virtual identity, the identity that counts. I think of how Freud believed in the power of communities to control and subvert us, and a psychoanalytic pun comes to mind: 'virtuality and its discontents.' ... Here I offer five troubles that try my tethered soul. [1] There is a new state of the self, itself... [2] Are we losing the time to take our time?... [3] The tethered adolescent... [4] Virtuality and its discontents... [5] Split attention”** (Turkle, 2007; emphasis in the original).*

*“The cultural shift away from nature recreation appears to extend outside of the U.S. to at least Japan, and the decline appears to have begun 1981–1991. The root cause may be videophilia” (Pergams & Zaradi, 2008).*

*“...exposure to violent video games is a causal risk factor for increased aggressive behavior, aggressive cognition, and aggressive affect and for decreased empathy and prosocial behavior” (Anderson et al, 2010; from the abstract of a meta-analysis research study).*

*“Internet addiction is currently classified by mental health professionals as an Obsessive Compulsive Disorder (OCD), a mild to severe mental health condition that results in an urge to engage in ritualistic thoughts and behavior, such as excessive handwashing or, in the case of the Internet, Web surfing. 'But we are saying that we need to look at Internet addiction differently,' reports Dr. Dannon on behalf of his colleagues from Tel Aviv University and the Be'er Ya'acov Mental Health Center. 'Internet addiction is not manifesting itself as an “urge.” It's more than that. It's a deep “craving.” And if we don't make the change in the way we classify Internet addiction, we won't be able to treat it in the proper way” (“Scientist Redefines...,” Aug. 7, 2007).*

## **NEWS REPORTS**

*“In interviews and surveys many parents say that their children spend too much time in front of computers and on cellphones. Some parents worry that long, sedentary hours spent at a computer may lead to weight gain, or that an excess of instant and text messaging comes at the expense of learning face-to-face social skills. Some complain of having to compete for their children's attention more than ever” (Navarro, Oct. 23, 2005; New York Times report).*

*“The compound — part boot camp, part rehab center — resembles programs around the world for troubled youths.... But these young people are not battling alcohol*

or drugs. Rather, they have severe cases of what many in this country believe is a new and potentially deadly addiction: cyberspace" (Fackler, Nov. 18, 2007; NY Times report on South Korea).

"Study: Prolonged Internet use may cause psychotic episodes" (Even, Jan. 15, 2010; *Ha'aretz* headline).

And even the (former) Pope has put in his two cents: "*It is important always to remember that virtual contact cannot and must not take the place of direct human contact with people at every level of our lives...*" -- warning of the "*dangers such as enclosing oneself in a sort of parallel existence, or excessive exposure to the virtual world*" (Reuters, 2011).

Again, these are but some of the more extreme expressions of what one could call "virtu-phobia". For the reader who wishes to delve more deeply into some additional, recent Cassandras of virtuality, especially of the internet/communications/artificial intelligence variety, I would recommend reading some of the following studies and extended thought essays penned by very serious thinkers and scholars: Sherry Turkle, *Alone Together* (Basic Books, 2011); Evgeny Morozov, *The Net Delusion* (PublicAffairs, 2011); Saul Levmore & Martha C. Nussbaum, *The Offensive Internet* (Harvard University Press, 2011); Susan Maushart, *The Winter of Our Disconnect* (Tarchder, 2011); Elias Aboujaoude, *Virtually You: The Dangerous Powers of the E-Personality* (W. W. Norton & Company, 2011); Herbert L. Dreyfus, *On the Internet*, 2nd ed. (New York: Routledge, 2008); Al Abelson, Ken Ledeen & Harry Lewis, *Blown to Bits* (Addison-Wesley Professional, 2008); and John Brockman, *Is the Internet Changing the Way You Think?* (Harper Perennial, 2011), encompassing interviews with dozens of

pundits, some of whom are virtuality utopians, others dystopians, and several somewhere in between.

The purpose of my book is not to “prove” that these pronouncements and analyses are incorrect. In fact, several claims regarding the deleterious effects of the internet specifically and virtuality more generally, may indeed be valid. Conversely, there are scholars and pundits who view the world of virtuality in positive terms -- from the techno-utopianism of Howard Rheingold (1993) to Steven Johnson (2005), a counter-intuitive admirer of an increasingly sophisticated, virtuality-oriented pop-culture. The general impression (there is no way to “quantify” the number of people in the “pro” and “con” camps) is that the more numerous, and certainly more vociferous, pundits view the phenomenon with great wariness, many of them with outright alarm.

However, there is one crucial point of wide (but not universal) consensus within both camps when writing about the internet, new media and other manifestations of virtuality: the shared assumption that we are facing a new phenomenon with little precedent. For instance, Hayles avers that “virtuality is clearly related to postmodernism” (1999: 78).

Here it is useful to quote two of the few commentators who hold the opposite view. First, the person who coined the term “artificial reality” in 1973 -- Myron Kreueger: “Humankind has always inhabited a conceptual universe that is every bit as important to it as the physical world. Language, symbols, myths, beliefs, philosophy, mathematics, scientific theories, organizations, games, sports, and money are completely abstract dimensions but as much a part of our humanity as rocks and trees” (Turner, 2002).



Second, Markley points out in his introduction to the edited book *Virtual Realities and Their Discontents*: “The blind spot of many critics of virtual technologies lies in... their casual assumption that we are living in revolutionary times in which technology intervenes in our subjectivity in ways undreamt of before the late twentieth century” (1996: 9). Markley is technically wrong and substantively correct. The modern age *has* been witness to new forms of “re/presentational” technologies that could not have been dreamt of in the past; however, these are more (and mere?) *technical* improvements on forms of virtualizing that have existed from time immemorial (as Markley astutely suggests), rather than *substantive* “improvements” on the essence of past virtualities. It is the contemporary, general, underlying assumption, and attendant idea, that we are somehow undergoing a gigantic, “social experiment” with few historical precedents – and therefore must proceed with extreme caution – that the present book attempts to invalidate. To be sure, there are scholars who do point out virtuality precedents here and there, but they almost always focus on one specific field of human endeavor as the harbinger of contemporary virtuality.

Perhaps the best example of this is Boellstorff, whose introductory comment in his study is an excellent summation of the theme of the present book: “...our lives have been 'virtual' all along. It is in being virtual that we are human: since it is human 'nature' to experience life through the prism of culture, human being always has been virtual being. Culture is our 'killer app': we are virtually human” (2008: 5).<sup>2</sup> Very promising -- but his book is an in-depth study of another narrow topic: virtual worlds (Second Life). In

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<sup>2</sup> Among the few who are aware of the possibility of such a broad reading of historical virtuality, not all agree with such a perspective. For instance, Otto (2011: 6), argues that Boellstorff's definition of virtual reality “seems too broad”. Interestingly, he places the start of virtual reality in the early 19th century Romantic era, providing a fascinating treatment of virtual entertainments during that period. But once again, we find here a very topic-specific treatment of the subject.

other words, even those few researchers who are able to perceive virtuality as a longstanding phenomenon in the human condition, merely use that insight as a springboard for a highly focused treatment of one or another virtual enterprise. They might have the right "recipe" for virtuality, but don't get around to cooking the meal. The proof is not in this or that "pudding" but in the entire repast.

This book is such a cooked banquet. It takes a wide-ranging, holistic approach, presenting numerous antecedents of virtuality throughout the past centuries, millennia and even tens of thousands of years. I will describe and analyze in some detail how virtuality can be found in numerous fields of human endeavor, and how/why at some point in the modern age it became a central locus of society precisely because of its universality. In other words, at a certain point *quantity = quality*. When human experience is surrounded by, and human thought immersed in, virtuality's many guises, one can say that it has become a *sine qua non* of humanity's social and intellectual life.

It goes without saying that this book makes no claim to a "complete" survey of all fields of human endeavor – something that would be difficult to do even in a multi-volume encyclopedia. Moreover, when surveying specific fields of human endeavor, the treatment here will be largely (but not exclusively) Western-world oriented. My apologies to half the world's population in the East, but trying to cover the long and venerable history of religions, philosophies, artistic accomplishments, and scientific/technological discoveries and inventions would have turned what already is a fairly large book into an unwieldy tome. Moreover, to be frank, my knowledge of the East is not nearly the same as that of the West. However, from what I do know about Eastern history and culture (and even the term "East" is a gross over-generalization, just as is the term "Western

culture"), I am willing to hypothesize that there is no significant difference between the two worlds from the standpoint of virtuality's expression and development over time. Readers more closely familiar with specific Eastern cultures can judge for themselves how close (or far) the relevant field-related chapters are to the Eastern experience. Perhaps a complementary book can be written on "Virtuality and Eastern Humanity". However, I do not think that this is really necessary, for half of the present book's chapters (1-2; 11-14) deal with issues that are culturally global and universally human. For instance, human psychology and the ways/whys we virtualize (chapters 2 & 11) are surely common to all human beings (except for some minor details); similarly the interaction between virtuality and reality (chapter 12) are to be found everywhere (e.g. yin = body; yang = spirit); and so on. Thus, at base this book *does* relate indirectly to the East as part and parcel of humanity taken as a whole. In any case, a few chapters do give the East its due, especially regarding specific achievements or concepts that have played a role in Western Civilization.

As noted above, I had to be selective in the fields of endeavor chosen for discussion. Therefore, the book focuses on several central areas of life, and within each of these it emphasizes aspects that incorporate virtuality. The argument here is certainly not that most of our lives have always been taken up in virtuality; given the basic need for most humans through most historical periods simply to feed, clothe, and house their families, such a claim would be patently false. Rather, I argue that *despite* this fundamental, material need, humans have always found the time and energy to indulge in virtual activities – and as I will suggest in chapter 11, perhaps we virtualize in part *because* of the mind-numbing nature of feeding, clothing etc.

In any case, virtuality is not a phenomenon born of modern "communication" (computer + communications) technologies but rather has existed from time immemorial. In our era it is evident in areas of life well beyond the restricted domain that most analysts would have us believe. In short, what is new in this book's claim is that virtuality is not new. Quite the reverse: it has always been an integral component of human existence.

### **The Outline of the Book**

In order to present the history of human virtuality, one must first define the term. Paradoxically, this turns out to be at one and the same time a very easy and fiendishly difficult task. Easy because there are so many definitions to choose from; difficult because many of the definitions relate to widely disparate phenomena, a function of the different disciplines and fields of expertise of those people doing the defining. Chapter 1 will therefore attempt to bring some order to this definitional cacophony, first by presenting the historical evolution of the term and then by laying out a spectrum of virtuality definitions and a few common denominators. Not every reader will accept every definition; "virtuality" is a slippery taxonomic concept.

Nevertheless, such a variegated list of meanings should not pose a serious problem regarding the description of virtuality and its analysis in the central part of this book. This is because my underlying argument posits that it is the overall *quantity and breadth* of virtuality that renders it such an important part of the human experience, and not the qualitative essence of this or that specific form of virtuality – any one of which could be legitimately dismissed by this or that reader as not being "virtual" at all.

Chapter 2 constitutes a bridge to, and the underlying foundation of, the book's second section. Here I analyze the brain in light of human perceptual and cognitive psychology. By describing how the brain perceives the world (the physical process of perception) and analyzes it (cognition), we can better understand why "virtuality" is not only attractive to humans but is actually inherent in the very nature of the way the brain works. If that is so, then the ensuing chapters (within Section II of the book) that survey virtuality within the full panoply of human existence, make sense *a priori*.

Section II of the book offers a survey of several central areas of human endeavor from time immemorial until the present day, from the standpoint of virtual activity found in each area. These chapters deal with the following major topic fields: religion (chapter 3), mathematics, philosophy, physics & cosmology (chapter 4), music, literature & the arts (chapter 5), economics (chapter 6), community & nationhood, government, war (chapter 7), and finally mass communication until the early 19<sup>th</sup> century (chapter 8).

To be sure, in some cases the distinction between field or discipline "A" and "B" is somewhat arbitrary and to a certain extent even anachronistic. For example, what we today call "physics" and "philosophy" were not differentiated by the ancients into two disciplines but rather thought to be two sides of the same coin ("natural philosophy"). Moreover and conversely, there also existed significant overlap between "disparate" fields: religion and the arts obviously were inextricably connected during certain eras when painting and sculpture were devoted almost exclusively to glorifying Almighty God and Associates. Indeed, one of my underlying arguments in this book is that virtuality feeds off a certain mindset or mental template that is transferable across disciplines. Thus, while the analysis in Section II will proceed largely by specific chapters, each

devoted to one "field" or a few that are obviously interrelated, I shall note in passing their relationship to other, ostensibly unrelated, fields – not only conceptually but at times even chronologically (e.g. monotheism and writing).

The subject matter of each of these chapters, therefore, should not be viewed separately but as part of a vast tableau of human endeavor in which virtuality is found throughout. Moreover, to repeat the obvious point one last time, Section II certainly does not include all relevant areas of life. Additional chapters could have been included on sex (pornography; fantasies); education (face-to-face/oral vs distance/textual; games for problem-solving and simulation for training [Castronova, 2005: 252]); medicine (mental-oriented psychology vs. pharmaceutical psychiatry; mind over matter); law & cybercrime, and so on. Most of these topics will be addressed briefly in various chapters throughout the book, but will not receive the full treatment given the subjects in Section II. Again, the book's central argument does not depend on any specific chapter herein (or not included), but rather on the complete picture as presented *in toto*, in addition to other fields of life that readers might wish to consider on their own.

Section III of the book continues the thrust of the argument, focusing on the last 200 years that constituted a quantum leap in the degree of human virtuality. To a certain extent, this point gradually becomes obvious in the chapters of Section II that show how each field of human activity was witness to both a quantitative increase as well as greater qualitative "depth" of the virtual experience during the past two centuries.

Why did this happen? Chapter 9 will first analyze with a broad brush the major factors and trends that brought about the tremendous acceleration of virtuality in the modern age – from the Renaissance through the present day. Obviously, using 1800 as

the "pre-modernity" cutoff date is somewhat arbitrary, for several origins can be clearly delineated well beforehand while other elements became salient sometime afterwards. There exists a strong element of continuity between the pre-modern (post-medieval) and modern ages, despite the obvious differences in the extent of virtuality found before and after. In this chapter I shall then attempt to show the intricate connections of virtuality *between* these various fields of human endeavor; that is, how virtuality in specific areas of life generated greater virtuality in others through an ongoing, "virtuous" circle.

Chapter 10 focuses on the central socio-cultural axis of modern virtuality: new media, widespread communications systems, and modern culture reflecting several virtuality trends. I should note that chapter 8 is the only one in Section II that does not carry forward the evolution of the field into the 19<sup>th</sup> & 20<sup>th</sup> centuries. Because of its critical centrality to the modern world, I left the wide-ranging survey and analysis of communications for separate treatment in chapter 10.

Section IV asks a few cardinal questions emanating from the previous chapters' survey of virtuality throughout history. Chapter 11 raises perhaps the most fundamental question of all: why do human beings virtualize so much? Whereas chapter 2 (dealing with virtualizing brain psychology) hints at one possible answer -- the need to mimic/create an external world similar to the process constantly occurring within our brain -- the reasons for our extensive virtualizing are much more varied than that.

Chapter 12 serves as somewhat of an "antidote" to the previous two sections and attendant chapters. If sections II & III of the book devote (intentionally inordinate) attention to the virtual side of human life, here we shall try and somewhat redress the

imbalance by analyzing how virtuality and corporeality/"reality" have always been, and to an even larger extent continue to be, inextricably intertwined. In other words, the former is not merely a self-standing phenomenon threatening to "overwhelm" the latter, but rather one that in many respects is fed by, feeds into, and overall strengthens, our "real" life.

What of the longer term future? Section V concludes the book by raising questions and indulging in some speculations regarding the trend of increased virtuality and where that might lead. First, chapter 13 forms a bridge to the future. If the Child is the future of Man, then present technologies in their infancy are the forbearers of our future. Here I shall survey several "new" technologies that will have direct bearing on virtuality in the mid-to-long term future: neuroscience, biotechnology (based mainly on genetics), and once again communications.

The former holds the promise (threat?) of opening new vistas regarding what we will be able to do within, and for, our minds, especially regarding mental virtualizing. If neuroscience constitutes *internal* manipulation of the *brain* in order to advance virtuality, then biotech does the same for, and with, our *bodies*. Here we may be on the cusp of transforming ourselves into "hybrid" creatures, commonly called cyborgs or trans-humans -- semi-artificial beings. Finally, communications (Artificial Intelligence, Virtual Reality, Hyperband Internet etc.) has to do with developing *external* tools to project and present wider and deeper uses of virtuality. As we shall see, to some extent these three broad disciplines are already inter-related today and will become increasingly so in the not-too-distant-future.



Nevertheless, here too the trend to broader virtuality will not necessarily be linear. Other futuristic technologies, e.g. nano-technology and 3D printing, will drive us back to the corporeal world based on atoms and not bytes (to use the distinction first made by Dertouzos, 1997). In short, the future might hold more of the same – only with greater intensity: irresistible technological forces pushing us towards increased virtuality, alongside the immovable object of our corporeal bodies pulling us back, or keeping us anchored, to the surrounding physical world that demands its non-virtual due.

This leads to the final substantive chapter in which I tackle a double-edged question. Chapter 14 asks whether there are limits to the amount and type of virtualizing humans *can* do and *should* do. Here I present arguments and evidence to the effect that in our present corporeal incarnation, humans will not and cannot completely abandon corporeal reality for virtuality, nor will they completely abandon reality for representations, simulacra and the like. There is no "Matrix" in our near future. As for the more distant future, chapter 14 concludes with some speculations as food for thought, based in part on extrapolating out even further several of the technologies discussed in chapter 13.

I end the book with a short Conclusion in which I tie together several of the main arguments and theses, as well as offering an explanation of how and why we moved from the Great Ape's non-virtual mental world to *Homo Sapiens Sapiens'* widespread use of virtuality.

### **The Book's Epistemology and Inter-Disciplinary Approach**

A few words are in order regarding this book's disciplinary approach specifically and its general epistemology. As the above outline of this book's sections and chapters

suggests, two complementary approaches are used. On the one hand, Section II presents the many facets of virtuality in *diachronic* fashion: each topic is surveyed in somewhat chronological fashion over human history through the modern age, with occasional cross-topic comparisons. The ensuing sections of the book, however, offer a more in-depth, *synchronic* analysis in the modern and/or contemporary-to-future periods. Here the analysis cuts vertically across the sundry areas of life, with greater emphasis on the *organic* interplay of their virtuality characteristics. As a result, as I already noted above, here and there I will revisit some of the modern virtual phenomena already surveyed in Section II, but as complementary parts of one holistic mosaic.

Overall, then, this study may be “about” virtuality, but the underlying theme is that “virtuality” cannot be categorized as belonging to any specific discipline, and especially not “new media/computer science,” i.e. “communications”. Obviously, the subject of virtuality today has become a central concern in the field of Mass Communications (especially the sub-discipline called New Media), in which I have done most of my research and writing over the past two decades. However, in an important sense this book’s approach goes against the historical grain of the discipline.

How so? Mass Communications studies emerged in the middle of the 20th century from several disparate fields: politics, sociology, psychology, journalism, speech, mechanical & electrical engineering, etc. Until the 1970s, there were few communication scholars who had a PhD in Mass Communications/Mass Media. Most had done their initial research in other related disciplines (e.g. Innis came from Economics; McLuhan from English Literature; Lazarsfeld from Mathematics and later Sociology; Elihu Katz from Sociology; Shannon from Mathematics & Engineering; and so on). The field

struggled mightily to create a focused "discipline" out of the multifarious methodological approaches and sundry topics researched. By the latter part of the 20<sup>th</sup> century, though, the field had coalesced sufficiently to be considered a bona fide discipline.

However, such a sharpened disciplinary approach also has its drawbacks, chief of which is a narrowing of focus. The present study, therefore, is an attempt to return to the field's roots by freely drawing from other disciplines in an attempt to understand what is at base a very fundamental, i.e. inter-disciplinary, phenomenon. It is what Charles Tilly (1984) called (somewhat bombastically): "world-historical research", i.e. combining disciplines and spanning the ages.

Moving from methodology to epistemology, Western philosophy and science offers two broad modes of thought, roughly speaking: "essentialism" and "historicism". Without going too deeply into nuances, each approach can be summed up in the following manner. *Essentialism* attempts to uncover and analyze fundamental truths about the natural and social worlds (Rorty, 1979: 361-65). Specific historical events or diverse social phenomena are viewed as part of an underlying foundation of immutable "laws". *Historicism*, on the other hand, perceives social and even natural phenomena as products of discrete historical contingencies. In terms of modern physics, Newtonian physical determinism is essentialist (the same laws hold sway everywhere and at all times), while Einsteinian relativity (everything depends on the relative position and speed of the object being investigated) and quantum mechanics (wave-particle duality) are the natural science counterpart to social historicism (i.e. environmental/situational contingency).

This book argues from an essentialist perspective but with a heavy dose of historicism. In brief, I argue that on the one hand virtuality is a constant in human affairs because it is an integral outgrowth of human psychology; on the other hand, the extent to which – and ways through which – virtuality is expressed are historically contingent. In large part this is a function of technological capabilities and other social phenomena that may encourage or discourage its full expression. Put simply, just because virtuality is a constant in human society does not mean that it will express itself perpetually and consistently in the same fashion during different epochs and within sundry societies. With virtuality, there is great variety in the way it can be manifested, but its appearance almost everywhere and anytime is itself a given.

A final word -- on writing style. Academic works, even those geared to a broader, educated-lay audience, tend to forego the word "I" for the more collective and neutral "we". In a sense, this is an attempt to "virtualize" the author, i.e. replace the subjectivity of the individual writer for the more objective, "collective" wisdom of the group/audience.

I will not adhere to this style mainly because *a priori* one cannot impute acceptance of the author's arguments by the audience. In any case, as this book is not based on mathematical or lab-experiment types of "proof", but rather makes its case through a broad-ranging survey of the human condition, I cannot and do not expect readers to agree with everything that I have to say, nor even to accept that this or that piece of "evidence" actually supports the general argument. Thus, I will use the first person singular when presenting an argument, and leave the "we" for more general comments of a societal nature (e.g. "despite the decline of established religion, we still tend to believe in God"). True, virtuality is to be found everywhere, as this book attempts

to show, but the author of this work is quite palpably made of flesh and blood. The fact that you are absorbing my work through virtual, symbolic means (letters on a page or screen) should not obscure the fact that a real-life, fallible human has collected the evidence and generated the arguments found herein.