COMMUNICATION AND CURATION:

EMBODIED MEANING AND PRAXIS

by

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A DISSERTATION

Presented to the School of Journalism and Communication
and the Graduate School of the University of Oregon
in partial fulfillment of the requirements
for the degree of
Doctor of Philosophy

September 2016

DISSERTATION APPROVAL PAGE

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Title: Communication and Curation: Embodied Meaning and Praxis

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DISSERTATION ABSTRACT

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Doctor of Philosophy

School of Journalism and Communication

September 2016

Title: Communication and Curation: Embodied Meaning and Praxis

This dissertation focuses on developing and furthering curation as a mode of inquiry for the discipline of communication, and how concepts can lead to action (praxis) for life. It will contribute to the ongoing repair of communication and media studies by addressing how an emergent interdisciplinary curational approach leads us to reimagine media and materiality, thus redefining communication today.

The study presents definitions of the key concepts in communication and media studies. To ground this *curational communication research* approach, interdisciplinary and integrative accounts are composed using radial category analyses of medium, media, and intermedia, as well as the emergent extensions of information, multimedia, transmedia, and metamedia.

Three exemplars are presented to explore the material practices providing evidence of an applied curational approach. They focus on Jane Addams and Ellen Gates Starr's Hull-House and Museum, the 1893 World's (Fair) Columbian Exposition, and the collaboration between John Dewey and Albert Barnes at the Barnes Foundation.

An argument is made for an embodied aesthetics, ethics, and design built along a Pragmatist line that can contribute to new notions of curation and its relation to

communication, embodied meaning, and praxis. The dissertation offers a framework for engaging curation as meliorative, stewarding, and repairing. The pragmatist exemplars demonstrate an orientation to medium/media that embraces embodiment and nature to help us rethink how this mode of inquiry plays out concretely in people's lives.

Overall, the dissertation brings forward marginalized resources of embodied cognition in communication theory to revitalize and ecologize communication theory-practice. We need a novel pragmatist conception of curation, not merely preservation and presentation of artifacts, but as a participatory activity, a melioristic remaking of experience for the better, as a caring for, as a repair of, and as a stewardship supported by pragmatism.

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ACKNOWLEDGMENTS

This dissertation is dedicated to Louis and Joan Swartz.

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CHAPTER I

INTRODUCTION

This dissertation focuses on developing and furthering *curation* as a mode of

inquiry for the discipline of communication, and how concepts can lead to action (praxis)

for life (e.g., civic engagement or publics). It contributes to the ongoing repair of the

discipline by addressing how an emergent interdisciplinary curational approach leads us

to reimagine media and materiality that are redefining communication today.

Defining Curation

There were notions of curation that were appropriate for particular time periods,

but we need to rethink curation today. Curation has been understood as a mode of

selection, a method of corralling, turning a cacophony (chaos) into a symphony (order)

for new modes of inquiry to emerge.

My notion of curation enacts the contemporary and Latin root notions of the term,

especially when considered as aesthetics, ethics, and design approaches simultaneously—

a repair of pragmatist values in communication theory. This includes embodiment,

methodological pluralism, and meliorism to an intersection of the ongoing engagement

with political, ecological, and economic transitions.

Curation is defined in its more widely used conception by the *Oxford English*

Dictionary (OED) second entry as the care and stewardship of objects. The first entry

relates more specifically to medicine and curing of disease in terms of medicine and

health. I develop this into the concept of *re-pair* of conceptual dichotomous "pairs" (e.g.,

subject/object, nature/culture, body/mind, organism/environment, analogue/digital,

physical/virtual) along with the *repair* of social, cultural, economic, political, biological-environmental—or better yet—ecological systems of life.[1]

The etymology of curation is as follows:

Middle English < Old French curacion < Latin cūrātiōn-em, noun of action < cūrāre to cure

    1. The action of curing; healing, cure.

    2. Curatorship, guardianship.

        b. The supervision by a curator of a collection of preserved or exhibited items.

The OED's third framing of curating is "The supervision of a museum, gallery, or the like by a curator; the work of storing and preserving exhibits."[2] Additionally, it is important to take into consideration how the public access archive Wikitionary approaches the definitions and etymology of *curation* and *cure* (see Table 1).

The mode of inquiry engaged is a curational approach where experience enacts a form of inquiry, that is, an engaged act of inquiry, both critical and constructive in a democratization of places, spaces, and traces. The dissertation itself can thus be understood as an act of curation.

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[1] Fritjof Capra and Pier Luigi Luisi, *The Systems View of Life: A Unifying Vision* (Cambridge, UK: Cambridge University Press, 2014).

[2] "† cuˈration, n.," OED Online, June 2016, Oxford University Press, accessed August 28, 2016, http://www.oed.com.libproxy.uoregon.edu/view/Entry/45958?redirectedFrom=curation; "curating, n.3," OED Online, June 2016, Oxford University Press, accessed August 28, 2016. http://www.oed.com.libproxy.uoregon.edu/view/Entry/241906.

Curation and Communication

  This dissertation proposes a curational approach for a fuller, richer account of experience in communication, which enacts an emergent interdisciplinary mode of inquiry. We need a reflective understanding of the ways in which media technologies have radically changed our values and raised fundamental issues. Curation is not merely the warehousing, care, and maintenance of objects. Curation is also not merely the live presentation and archiving of experiences in a digital format for long-term representation of experiences (markets and storage mediums for information technology). In my view, ***curation is a dynamic mode of inquiry into the fundamental assumptions, values, and limitations of current communicative theory and practice, and it opens up new possibilities for (participatory) communicative praxis.*** It is where values are questioned and new media technologies are interrogated and made interactive with other technologies. This project involves a participative (civic) engagement that brings participants into an exploration of medium, media, multimedia, meta- (originally meaning *with*, not above or beyond), metamedium, hypermedia, intermedia/fluxus, cybernetic art, transmedia, and curated exhibitions.[3]

  Over the past century, especially over the past few decades, the confusion over the definitions of what constitutes a medium, media, and communication has changed so swiftly and radically that even leaders in *the media* are perplexed. Students in traditionally journalistic curricula, who are aware of multimedia, social media, and convergent media approaches, are inadequately prepared to address not only the rigorous skill sets required for programming computationally (e.g., coding, data journalism,

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[3] See Appendix A: List of Exhibitions and Museums.

Table 1. Etymology and definitions of curation.

Curation (Etymology) (https://en.wiktionary.org/wiki/curation)
    From Latin cūrātiō.
Cūrātiō (genitive cūrātiōnis) (https://en.wiktionary.org/wiki/curatio#Latin)
    treatment, care, operation (medical, surgical)
    administration, office (public)
Cūra (genitive cūrae) (https://en.wiktionary.org/wiki/cura)
    Care, concern, thought; trouble, solicitude; anxiety, grief, sorrow.
    Attention, management, administration, charge, care; command, office; guardianship.
    Written work, writing.
    (medicine) Medical attendance, healing.
    (agriculture) Rearing, culture, care.
    (rare) An attendant, guardian, observer
Curo (cūra + -ō) (https://en.wiktionary.org/wiki/curo#Latin)
    I arrange, see to, attend to, take care of, ensure
    I heal, cure
    I govern, command
    I undertake, procure
Cūrātiō (From cūrō) (https://en.wiktionary.org/wiki/curatio#Latin)
    treatment, care, operation (medical, surgical)
    administration, office (public)
Curation (https://en.wiktionary.org/wiki/curation)
    The act of curating, of organizing and maintaining a collection of artworks or artifacts.
    (archaic) The act of curing or healing.
    (databases) The manual updating of information in a database.

Curator (etymology) (https://en.wiktionary.org/wiki/curator)
    From Latin curator ("one who has care of a thing, a manager, guardian, trustee"), from curare ("to
    take care of"), from cura ("care, heed, attention, anxiety, grief").

Curator (https://en.wiktionary.org/wiki/curator)
    A person who manages, administers or organizes a collection, either independently or employed by a
    museum, library, archive or zoo.
    One appointed to act as guardian of the estate of a person not legally competent to manage it, or of an
    absentee; a trustee.
Curate (https://en.wiktionary.org/wiki/curate)
    (transitive) To act as a curator for.
    (transitive) To apply selectivity and taste to, as a collection of fashion items or web pages.
    (intransitive) To work or act as a curator.
Cure (https://en.wiktionary.org/wiki/cure)
    A method, device or medication that restores good health.
    Act of healing or state of being healed; restoration to health from disease, or to soundness after injury.
    A solution to a problem.
    A process of preservation, as by smoking.
    A process of solidification or gelling.
    (engineering) A process whereby a material is caused to form permanent molecular linkages by
    exposure to chemicals, heat, pressure and/or weathering.
    (obsolete) Care, heed, or attention.
    Spiritual charge; care of soul; the office of a parish priest or of a curate.
    That which is committed to the charge of a parish priest or of a curate; a curacy

Source: wiktionary.org

visualization, and autonomous drone journalism) but the moral and ethical (ecological) implications most especially.

We have inherited a certain conception of medium, media, and communication. The ways in which those terms have been understood and applied (e.g., newspapers, radio, TV, and cinema) diminish the multifaceted problematization of organism-environment interactions. Furthermore, the traditional view of communication over the last century— from the Walter Lippmann and John Dewey debate through the creation of the Claude Shannon and Warren Weaver model to James W. Carey's transmission/ritual view to quantum leaps in digital media—is no longer a sufficient frame to cope with embodied/corporeal/analogue forms of information and media.

The field of communication is in the midst of digitization (digital immersion) and undergoing a paradigm shift that involves changing views, practices, forms of judgment, institutions, experimental, and communicative practices and what constitutes significant phenomena. We need to rethink fundamental concepts of medium, media, communication, and meaning. I analyze these concept clusters and investigate how they lead to a dynamic, radical, and reconstructive project/inquiry that moves communication and media scholars beyond habituated modes of thinking.

Research Questions

For this project, I have focused on four fundamental research questions:

RQ1: What is "curation" and how does a deeper understanding of this concept better

help communication and media scholars reconceptualize what

"communication" and "media" are? (RQ1 has been addressed in this introduction and will be discussed further in subsequent chapters).

RQ2: How have material enactions of a curational approach been utilized by various civic (affairs and engagement) innovation institutions in the past?

RQ3: How are material enactions of a curational approach being utilized in various forms of "emergent media"?

RQ4: How does the political-economic structure of these material enactions of various curational approaches reflect, remake, and repair societal values?

Theoretical Discussion

The guiding theme of the dissertation is to articulate an emerging notion of curation that blends (embodied) aesthetics, ethics, and design so that what emerges is a mode of inquiry that investigates material notions of communication. In bringing these three approaches together to articulate a *curational* inquiry into communication, my point is to provide a critical perspective that articulates a conception of curational inquiry that is compatible with new research in communication and meaning making.

Figure 1 indicates an expansive and expanding notion of media, technology, and as such communication that will be explicated in various chapters. It is essential to note these levels and how they play out with each other in their coevolution and implications. First, there are no fixed notions; the primary unit is an ongoing process (not an entity), whereby meaning and value emerge out of an ongoing and transformative relationship to the contingencies of our world. Second, the way in which the notion of an organism is evolving and what were seen as internal are now extended into the environment. Third,

the organism-environment coevolution is evidenced in emergent media (e.g., avatars as an elaboration in history and in an external context).
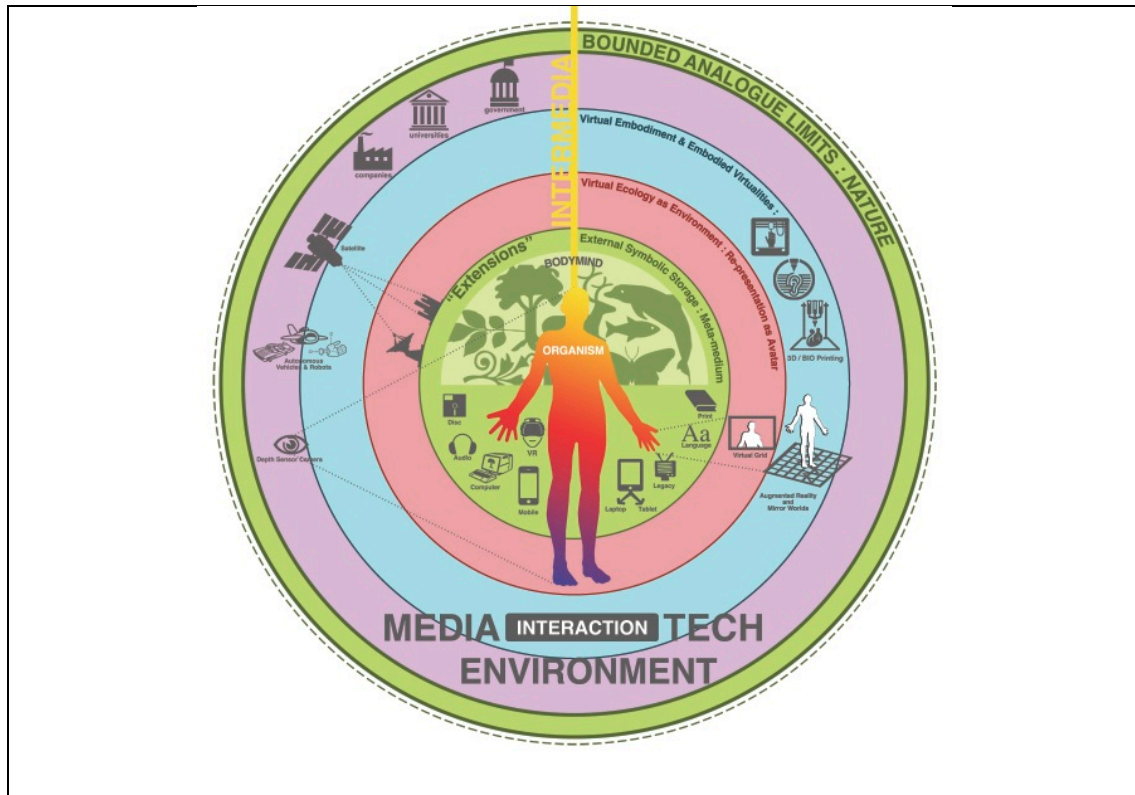
Figure 1. An illustration of the levels inherent in an organism-environment interaction with extensions, all of which are bounded by the natural world.

This is accomplished by acknowledging digital extensions to bodymind, transformations in interfaces, and physical and virtual blended worlds we are unconsciously and consciously immersing ourselves within. Emergent media are radically changing our experience, and I propose a multimodal conception of curation for communication in order to answer my research questions.

Curation has three meanings and does much work in these ways:

1. It brings together ***subject matters (ideas)*** into dialogue with each other. Thus, curation is interdisciplinary (comparing and contrasting) due to its capacity to bring various frames, metaphors, and conceptual blends into *metadiscourse*.

2. It blends together disparate ***material objects of inquiry*** into discourse with each other. It is thus transdisciplinary (transformation and cross-fertilization across disciplines) due to its capacity to bring various mediums, media, and mediations within a holistic framework.

3. It collates ideas and material objects together through the storage, management, and retrieval of digital information (i.e., data and metadata).

A pragmatist notion of curation is a synthesis of aesthetics, ethics, and design. This lens of curation, as a method, links together parallel theory-practices in communication, media, science, art, politics, economics, and philosophy. My goal is to develop a new notion of curation that blends an American Pragmatism-inspired *curational* approach (á la John Dewey, James W. Carey, George Hein, and Paul Rabinow), *grounded practical theory* (á la Karen Tracy and Robert T. Craig), and a *political economy* approach (á la Harold Innis, Vincent Mosco, Graham Murdock, and Fred Turner). My inquiry through the lens of an American Pragmatist framework (philosophy) examines the (somewhat) hidden legacy of my area of expertise in communication and media ecology. Each of my areas of interest in communication and media build a case for a reparative and integrated conceptualization of post-postmodernist thinking. Three areas in communication theory that I explore include:

1. a history of early communication theory,

2. diverse modes of inquiry included within "ecologies of media," and

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3. specific praxical approaches to the political economy of communication.

I bring these frames into dialogue with *embodied philosophy* including three themes:

1. the crucial role of the body in how we make and communicate meaning,

2. methodological pluralism that is required for an adequate account of the complex phenomena of communication in the 21st century, and

3. meliorism, that is, an attempt of repairing, remediating, and devising new approaches.

I bring these seemingly disparate disciplinary approaches into dialogue, which is what Robert T. Craig calls *metadiscourse*. Again, it is possible to focus on three intersecting areas of communication and philosophy from an American Pragmatism perspective including aesthetics, ethics, and design.

1. **An aesthetics approach** looks at the implications of embodied meaning and aesthetics for communication theory and praxis. I draw on communication theorists, such as Cooley, Innis, McLuhan, Carey, Craig, Newton and Bivins, Fuller and Malina, and Russill, along with philosophers, such as James, Dewey, Addams, Mead, and Johnson. This allows for the exploration of some implications of *virtual embodiment* and *embodied virtuality*.

2. **An ethics approach** brings together how an embodied public interest, public good, and alternative notions of intellectual property can become agents of change.

3. **A design approach** brings art and science together in a way that realizes the aesthetics and ethical dimensions of curation.

This historical and curatorial modality has the possibility to become a mode of inquiry, which builds on previous museum exhibition experiences. One way I address my research questions is to develop a general accounting of the multiplicity of meanings for fundamental terms from a multidisciplinary perspective. This will include the following key notions, in addition to curation and communication:

- medium, media, meta: *with*, metamedium, multimedia, intermedia/Fluxus (experiential art and media), transmedia, and metamedia;

- information: analogue, digital, primary (physical), and secondary (representational) legacy documentation and tertiary documentation (i.e., metadata);

- meaning; and

- material culture and ecological living, self-curating one's organism-environment ecology (maker culture; environmental education).

From this curational perspective, I have investigated what communicative immersive environments mean in praxis, providing exemplars and their relevancy. Certain conceptions of curation were adequate for time periods, but we need a more flexible notion of inquiry, one that is more adequate to the realities of emerging technologies that we are facing. This is not only a theory but also a practice via intersections between material, ephemeral, physical, and virtual dimensions.

This dissertation contributes to the ongoing repair of communication and media studies by addressing communicative immersive environments that we are ever presently experiencing and documenting. How can an American Pragmatist curational approach help illuminate paths forward when dealing with emergent media and communication

frameworks, platforms, and institutions? Repair in information technology is an example of a curational approach, as are curing/healing in medicine and problem solving in philosophy. Curation allows for an expansive exploration of meaning, communication, and values.

All these radical transformations of communication and transformative practices are ongoing and profoundly affecting our lives at an ever quickening pace. I intend to provide elaborations on these concepts from five areas of interest. Four will be presented in Chapter IV on emergent media: 1) information (analogue, digital, and hybrid), 2) metamediums (multimedia, new media, metaverse, and avatars), 3) transmedia (navigation and storytelling), and 4) metamedia (virtual embodiment, embodied virtuality, and academic areas of inquiry). The fifth is discussed in Chapter VI: museums, medicine, speculative design, and music/biology.

Method

There are a variety of methods employed in this dissertation. The method employed in Chapters II and IV is a *radial category analysis* of medium, media, and their extensions. Radial category analysis employs a philosophy of language method, whereby a central member category is created and spokes off of the center to elucidate various meaning structures of the central category (or prototype,[4] which then provides "the capacity to categorize").[5] These are then put into relationship with other categories as conceptual blends (including double scope and multiple scope blends).[6]

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[4] George Lakoff, "Cognitive Models and Prototype Theory," in *Concepts: Core Readings*, ed. Eric Margolis and Stephen Laurence (Cambridge, MA: MIT Press, 1999), 391-394.

[5] George Lakoff, *Women, Fire, and Dangerous Things: What Categories Reveal about the Mind*

Chapter III utilizes a historical approach focusing on late 19th to early 20th century Philadelphia and Chicago and explores how contemporary theory-practice is corroborated by John Dewey's experiential research. This chapter relies on ethnographic methods, including thick description,[7] interviews, and participant observation. The interviewees at Hull-House included the interim director along with a pragmatist feminist philosopher from Purdue. They were selected because of their expertise and direct knowledge of the transformative work of Jane Addams. Written notes and recorded audio were part of the interview process, which took place as an informal discussion following my conference panel on Communication and Pragmatism at the National Communication Association (NCA) Centennial Conference in Chicago, Illinois.[8] The audio recordings were transcribed and used to analyze the contributions of Hull-House.

The interviewee at the Barnes Foundation included an expert and past co-chair of the Alumni Council of the Foundation's Alumni Association. She was selected because of her background and long-term association and familiarity with the Foundation's collection. Written notes and recorded audio were also part of the interview process, which took place as a semiformal conversation following a conference panel on Communication and Curation at the Pennsylvania Communication Association (PCA) Pre-Conference in York, Pennsylvania. The audio recording was transcribed and used to analyze the contributions of Albert Barnes and John Dewey to the Foundation.

(Chicago: University of Chicago Press, 1990), 5-10.

[6] Gilles Fauconnier and Mark Turner, *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities* (New York: Basic Books, 2002).

[7] Clifford Geertz, *The Interpretation of Cultures: Selected Essays* (New York: Basic Books, 1973).

[8] National Communication Association, "100 Years of NCA," annual conference, Chicago, Illinois, 2014. https://www.natcom.org/Centennial.

Another methodological approach employed in this study was document analysis.[9] In addition to Hull-House and the Barnes Foundation, the history of the World's Fairs and Expositions involved extensive document analysis and archival research (e.g., The University of Illinois at Chicago Special Collections and University Archives).

Central to the dissertation is an evolving account of curation, which can be understood to employ notions of perplexity, science, art, and theory-practice. At the end of Chapter III, curational inquiry and materialist praxis for curational communications research are noted as contemporary overarching methods for advancing the entire dissertation. In addition, this dissertation is a metadisciplinary framework (see Chapter IV) to inform, effect, and remix art-science and publics to repair what were deemed disciplinary siloed conceptual frameworks.

Three modes of inquiry have been integrated as a single account, as indicated in Table 2, bringing together (A) grounded practical theory, (B) political economy, and (C) the legacy notion of curation. Building on the work of Karen Tracy and Robert T. Craig, a grounded practical theory approach was utilized. The stages of this approach include a mapping of the situation, engaged reflection on that map, and the emergent transformative practices that can come from this mode of inquiry.[10]

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[9] John Scott, *A Matter of Record: Documentary Sources in Social Research* (Cambridge, UK: Polity Press, 1990/2014); Lindsay Prior, *Using Documents in Social Research* (London: SAGE Publications, 2003).

[10] Robert T. Craig and Karen Tracy, "Grounded Practical Theory: The Case of Intellectual Discussion," *Communication Theory* 5 (1995): 248-272; Robert T. Craig and Karen Tracy, "Building Grounded Practical Theory in Applied Communication Research: Introduction to the Special Issue," *Journal of Applied Communication Research* 42.3 (2014): 229-243.

Table 2. Modes of inquiry.

(A) Grounded Practical Theory	(B) Political Economy	(C) Curation [Legacy notion]
Mapping	*History*	*Provenance*
Engaged reflection [design]	*Social totality*	Scientific and empirical
Transformative practice	*Moral Philosophy* and *Praxis*	*Connoisseurship*

Vincent Mosco, Graham Murdock, and Peter Golding provide a four-part political economic analysis toolkit, including a historical methodology, an accounting of the social totality of the area of inquiry, moral philosophy at work in the situation, and an assessment of the theory-practice (praxis) in the world.[11]

Finally, I engage legacy curatorial methods, which include accounts of a work's provenance (the history of an object), a scientific and empirical assessment of its material qualities, and connoisseurship (expert judgment that leads to decision making) in relationship to the (art)work in the world. Throughout the dissertation, I provide short explications of each mode of inquiry and then parallel their similarities and how they collectively provide a fuller, richer account of experience.

One example of this approach that may assist in our understanding would be how a pencil, a piece of chalk, or a tuning fork might structure our modes of inquiry. Some questions that arise may include

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[11] Vincent Mosco, *The Political Economy of Communication,* 2nd ed. (London: SAGE Publications, 2009); Peter Golding and Graham Murdock, "Culture, Communications and Political Economy," in *Mass Media and Society,* eds. James Curran and Michael Gurevitch (London: Edward Arnold, 1991), 15-32.

1. What are the material resources (biological wood, metal, paint, and process; environment), the tools for communication, being utilized by the medium or media of inquiry?

2. In what ways does it structure cognition (aesthetics; content and impact)? What values are in play in defining information and documentation? Most especially, consider the distinctions and relationships between material (physical) information or primary documentation and representational (abstract) information or secondary documentation.

3. What are social, moral, and/or political economic issues that emerge from the medium or media of inquiry?

Finally, I bring forward marginalized resources of embodied cognition in communication theory to continue to revitalize and ecologize communication theory-practice.[12] We need a novel pragmatist conception of curation, not merely preservation and presentation of artifacts, but a meliorative (problem solving), reparative engagement relative to the values that are operative in a given situated context.

Some of this work has been done in feminist critique, which raised some of these questions and made certain strides in acknowledging women's contributions at the beginning of the last century (especially those of Jane Addams). There are century-old

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[12] This can be conceptualized through what are called the four E's: embodied, embedded, enacted, and extended.
1. Embodied; Bodymind: "…cognition depends upon the kinds of experience that come from having a body with various sensorimotor capacities…"
2. Embedded: "these individual sensorimotor capacities are themselves embedded in a more encompassing biological, psychological and cultural context."
3. Enacted: "…the manner in which a subject of perception creatively matches its actions to the requirements of its situation" […] "the enactment of a world and a mind on the basis of a history of the variety of actions that a being in the world performs." Francisco J. Varela, Evan Thompson, and Eleanor Rosch, *The Embodied Mind: Cognitive Science and Human Experience* (Cambridge, MA: MIT Press, 1991), 176.
4. Extended, as in Marshall McLuhan's notions of extensions to human cognition, David Chalmers' notion of Extended Cognition, and Merlin Donald's systems of external symbolic storage.

resources that have seldom been cultivated in this way, via curation and integrated

notions of medium, media, and communication. Thus, I propose curation as an *embodied*

aesthetics, ethics, and design approach that embraces the complexities of current

communicative technologies, theories, and practices.

Literature Review and Definitions

This dissertation employs a plethora of terms from a variety of disciplines and

presents them in an interdisciplinary context. The following section presents an overview

of these terms, with selected references.

Communication

Literature on communication and its definition is available through the disciplines

of communication studies, philosophy, media studies, and cultural studies, among many

others.[13] Robert Craig defines *communication* generally as a first-order linear

"transmission or exchange of ideas," "meanings, packaged in symbolic messages."[14]

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[13] Charles Horton Cooley, "The Significance of Communication," in *Social Organization: A Study of the Larger Mind* (New York: C. Scribner's Sons, 1909), 100-109; Walter Lippmann, "The World Outside and the Pictures in Our Heads," in *Public Opinion* (New York: Free Press, 1965); John Dewey, *Experience and Nature,* Vol. 1 of *The Later Works, 1925-1953,* ed. Jo Ann Boydston (Carbondale, IL: Southern Illinois University Press and Intelex Electronic Edition, 1925/2008); Edward L. Bernays, "Manipulating Public Opinion: The Why and the How," in *Mass Communication and American Social Thought: Key Texts 1919-1968,* eds. John Durham Peters and Peter Simonson (New York: Rowman and Littlefield, 1928), 51-57; Charles Eames, and Ray Eames, *A Communications Primer* (Santa Monica, CA: Pyramid Media, 1980); James W. Carey, *Communication as Culture: Essays on Media and Society* (New York: Routledge, 1989/2009); Robert T. Craig, "Communication," in *Encyclopedia of Rhetoric,* ed. Thomas O. Sloane (New York: Oxford University Press, 2001), 125-137; Robert T. Craig and Heidi L. Muller, eds., *Theorizing Communication: Readings Across Traditions* (Thousand Oaks, CA: SAGE Publications, 2007); Bruce Clarke, "Communication," in *Critical Terms for Media Studies*, eds. W. J. T. Mitchell and M. B. N. Hansen (Chicago: University of Chicago Press, 2010); François Cooren, "Communication Theory at the Center: Ventriloquism and the Communicative Constitution of Reality," *Journal of Communication* 62.1 (2012); Paul Stob, *William James and the Art of Popular Statement* (East Lansing, MI: Michigan State University Press, 2013).

[14] Craig, "Communication," 125-137.

Additionally, it can be categorized as "a first-order level at which we assert our own political or intellectual point of view, and a metalevel at which we assert norms to govern processes of participation and inquiry."[15]

John Dewey offered the following definition:

Communication is consummatory as well as instrumental. It is a means of establishing cooperation, domination and order. Shared experience is the greatest of human goods. In communication, such conjunction and contact as is characteristic of animals becomes endearments capable of infinite idealization; they become symbols of the very culmination of nature.[16]

Meanwhile, James W. Carey posited three models of communication including transportation, transmission, and ritual models. Communication is thus the ultimate metatool, not only as language itself, but as medium to elaborate the distinction between mean-ends and ends-in-view.

Curation

As noted earlier, the OED defines curation firstly as curing and healing. Additionally, curation is the warehousing, care, and maintenance of objects. Curation is also the live presentation and archiving of experiences in a digital format for long-term re-presentation of experiences.[17] In a pluralistic, problematic world, how we

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[15] Robert T. Craig, "Pragmatism in the Field of Communication Theory," *Communication Theory* 17.2 (2007): 142.

[16] Dewey, *Experience and Nature*, 157.

[17] Paola Antonelli, "But Is It Art?" *Nieman Reports* 66.4 (2013); Stanley A. Deetz and ICA, "Future of the Discipline: The Challenges, the Research, and the Social Contribution," *Communication Yearbook 17* (Thousand Oaks, CA: SAGE Publications, 1994); John Dewey, *The School and Society* in Vol. 1 of *The Middle Works*, ed. Jo Ann Boydston (Carbondale, IL: Southern Illinois University Press and Intelex

communicate is critical. Often times we fail to recognize or remember that social

innovation is a pragmatist endeavour. As such, meliorism and social improvement

applied to education, changes in living standards, and relationships among communities

of practice can transform experience. From human interactions with environments to

deliberation and scenario planning, this category explores how communication has and

continues to enact defining pragmatist endeavours in social innovation.

Specifically, I offer examples of the collaboration between John Dewey and

Albert Barnes in the establishment of the Barnes Foundation, an institution to promote

"education and the appreciation of the fine arts and horticulture"[18] (Foundation and

Arboretum). While simultaneously, imagine Jane Addams's on-the-ground social

engaged settlement house and its contemporary "dynamic memorial" Hull-House

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Electronic Edition, 1900/1996); George E. Hein, *Progressive Museum Practice: John Dewey and Democracy* (Walnut Creek, CA: Left Coast Press, 2012); Steven J. Jackson, "Rethinking Repair," in *Media Technologies: Essays on Communication, Materiality, and Society,* eds. Tarleton Gillespie, Pablo J. Boczkowski, and Kirsten A. Foot (Cambridge, MA: MIT Press, 2014); Jher, "Contingency and Cybernetics: A View Through the Lenses of Users and Administrators" (paper presented at the International Association for Media & Communication Research (IAMCR) conference, Mediated Communication, Public Opinion and Society Section, Dublin, Ireland, June 25-29, 2013); Bruno Latour and Peter Weibel, *Making Things Public: Atmospheres of Democracy* (Cambridge, MA: MIT Press, 2005); Suzana Milevska, "Becoming-Curator," in *The Curatorial: A Philosophy of Curating,* ed. J-P. Martinon (New York: Bloomsbury Academic, 2013); John Henry Merryman, Albert E. Elsen, and Stephen K. Urice. *Law, Ethics and the Visual Arts* (Frederick, MD: Kluwer Law International, 2007); Paul Rabinow, "How to Submit to Inquiry: Dewey and Foucault," *Pluralist* 7.3 (2012): 25-37; Richard Shusterman [exhibition curator], *Aesthetic Transactions: Pragmatist Philosophy through Art and Life = Art et philosophie a l'état.* (Boca Raton, FL: Florida Atlantic University, 2012); Jeremy D. Swartz, "Pragmatism and Curation" (paper presented at the National Communication Association (NCA) 100th Annual Convention, Chicago, IL, November 22, 2014); Jeremy D. Swartz, "Metapatterns: Communication, Pragmatism, and Curation" (paper presented at 76th Annual Conference of the Pennsylvania Communication Association Pre-Conference, Patterns of Connection: Gregory Bateson, American Pragmatism and European Philosophy, Pennsylvania State University–York, PA, October 8-9, 2015); Fred Turner, *The Democratic Surround: Multimedia and American Liberalism from World War II to the Psychedelic Sixties* (Chicago: University of Chicago Press, 2013); Hans Ulrich Obrist and Lionel Bovier, *A Brief History of Curating* (Zurich: JRP/Ringier, 2008); Hans Ulrich Obrist and Asad Raza, *Ways of Curating* (New York: Faber and Faber, Inc., 2014); Steven Rand and Heather Kouris, *Cautionary Tales: Critical Curating* (New York: Apexart, 2007).

[18] "About," The Barnes Foundation, accessed August 28, 2016, http://www.barnesfoundation.org/about/.

Museum as a "site for the interpretation and continuation of the historic ... vision, linking research, education, and social engagement."[19]

Curation explores Dewey's dedication to an embodied aesthetics by reimagining an integration of communication and art and vis-à-vis experience and culture through shared contemporary museum practices. By focusing on the relational aesthetics of things and affairs, not only is inquiry conceived as mapping and reflecting on experience, but additionally there is a transformative (curatorial engagement in) practice, which in turn brings forth new and emerging patterns of experience. From the individual to community, Deweyan aesthetics and embodied curation are outgrowths of Pragmatism.

Design and Grounded Practical Theory

Grounded practical theory enables conceptual frameworks and exemplars "to articulate, critique, and further advance already existing practical tendencies in the use of theory by applied communication scholars."[20] J. Kevin Barge and Robert T. Craig engage three constitutive approaches: 1) *mapping*: creating high-quality maps through scientific,

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[19] "About The Museum," Jane Addams Hull-House Museum, accessed August 28, 2016, http://www.hullhousemuseum.org/about-the-museum/.

[20] Paola Antonelli, *Design and the Elastic Mind* (New York: MOMA, 2008); J. Kevin Barge and Robert T. Craig, "Practical Theory in Applied Communication Scholarship," in *Routledge Handbook of Applied Communication Research,* eds. Lawrence R. Frey and Kenneth N. Cissna (New York: Routledge, 2009), 55-78; Robert T. Craig, "Communication as a Practical Discipline," in *Rethinking Communication; Volume 1: Paradigm Issues*, eds. Brenda Dervin, Lawrence Grossberg, Barbara O'Keefe, and Ellen Wartella (Newbury Park, CA: SAGE Publications, 1989); Robert T. Craig, "Applied Communication Research in a Practical Discipline," in *Applied Communication in the 21st Century: Report of the Tampa Conference on Applied Communication*, ed. Kenneth N. Cissna (Hillsdale, NJ: Erlbaum, 1995); Craig and Tracy, "Grounded…."; Craig and Tracy, "Building Grounded…."; John Dewey, *The Public and Its Problems*, in Vol. 2 of *The Later Works* (Carbondale, IL: Southern Illinois University Press and Intelex Electronic Edition, 1927/1984); Charles Eames, "What is Design? (1972)" in *Design and Art*, ed. Alex Coles (London: Whitechapel (MIT Press), 2007), 154-156; Mads Nygaard Folkmann, "Aesthetics," *The Aesthetics of Imagination in Design* (Cambridge, MA: MIT Press, 2013); Randolph T. Hester, *Design for Ecological Democracy* (Cambridge, MA: MIT Press, 2006); William Myers, *Bio Design: Nature, Science, Creativity* (New York: MOMA, 2012).

interpretive, or critical methodologies to be used to inform practice, 2) *engaged*

reflection: the reflexivity between theory and practice—how each informs the other as a

systematic reflection on problems, dilemmas, and sites, and 3) *transformative practice*:

"immediate transformation ... of both the members of a community and the practical

theorist" by making sense of situations and taking action.[21]

Ecology and Systems

Ecology is the study of environments. Newton offers an inclusive account of

media in relationship to this study of one's surroundings.[22] "Media ecology is a

multidisciplinary field ... positing an open, dynamic, interdependent, and living system of

forces ... studying human communication systems." Newton explains that "media

ecologists work from an inclusive perspective, exploring the creation, exchange,

mediation, and dissemination of information, as well as the reciprocally influential

relationship among means/content of communication and communicators/users." She

unequivocally ties together the material and embodied constitution of the human

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[21] Barge and Craig, "Practical Theory…," 55-78.

[22] Gregory Bateson, *Steps to an Ecology of Mind* (Chicago: University of Chicago Press, 1972/2008); Brett Buchanan, *Onto-ethologies: The Animal Environments of Uexküll, Heidegger, Merleau-Ponty, and Deleuze* (Albany, NY: SUNY Press, 2008); Capra and Luisi, *The Systems View*; Mathew Fuller, *Media Ecologies: Materialist Energies in Art and Technoculture* (Cambridge, MA: MIT Press, 2005); W. Terrance Gordon, *McLuhan: A Guide for the Perplexed* (New York: Continuum, 2010); Ursula K. Heise, "Unnatural Ecologies: The Metaphor of the Environment in Media Theory," *Configurations* 10.1 (2002): 149-168; Marshall McLuhan and W. Terrance Gordon, *Understanding Media: The Extensions of Man [Critical Edition]* (Corte Madera, CA: Gingko Press, 1964/2003); Brook Muller, *Ecology and the Architectural Imagination* (Hoboken, NJ: Taylor and Francis, 2014); Julianne H. Newton, "Media Ecology," in *The International Encyclopedia of Communication,* ed. Wolfgang Donsbach (Malden, MA: Blackwell Publishing, Blackwell Reference Online, 2008/2015); Neil Postman, "What is Media Ecology?" Media Ecology Association. Accessed on 13 March 13, 2008; Carlos A. Scolari, "Media Ecology: Exploring the Metaphor to Expand the Theory," *Communication Theory* 22.2 (2012): 204-225; Lance Strate, "Media Ecology as a Scholarly Activity," *Amazing Ourselves To Death: Neil Postman's Brave New* World (New York: Peter Lang, 2014), 43-58; Douglas Rushkoff, *Program or Be Programmed* (New York: OR Books, 2010), 66-78; Harbin Tibbs, *Industrial Ecology: An Environmental Agenda for Industry* (Emeryville, CA: Global Business Network, 1993).

organism and its modes of expression: "Media therefore include ... such entities as the brain and body, ... languages, symbols, and codes (Information and Communication Technology…)." Finally, Newton restates fundamental frameworks from McLuhan's *Understanding Media*, when she states, "the terms 'media' and 'technology' [are used] interchangeably. 'Ecology' ... encompasses a complex range of meanings ... [including] systems theory to analyze the co-evolution of the human organism and technologies... [and the] role of technology in society."[23]

Embodied Aesthetics

Each of the works in this category explicate related definitions of aesthetics and its relationships to communication and philosophy.[24] Embodied aesthetics acknowledges the emerging dialogue between embodiment and a philosophy of communication. This emerging field is currently in the midst of repairing notions of what were formerly only known as "the aesthetic" dimensions of a work (e.g., The Good, The True, and The Beautiful). Instead, it is a movement to a fuller, richer account of experience as *embodied aesthetics*. This can be understood as how human beings experience and make meaning. Thus, embodied aesthetics is the acknowledgement of the body's central role in meaning

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[23] Newton, "Media Ecology."

[24] John Dewey, *Art as Experience*, in Vol. 10 of *The Later Works, 1925-1953,* ed. Jo Ann Boydston (Carbondale, IL: Southern Illinois University Press, 1934/1987); Susan L. Feagin, "Aesthetics," in *The Cambridge Dictionary of Philosophy* (2nd ed.), ed. Robert Audi (New York: Cambridge University Press, 1999), 11-13; Michael Griffin, "Art as Communication," in *The International Encyclopedia of Communication,* ed. Wolfgang Donsbach (Malden, MA: Blackwell Publishing, Blackwell Reference Online, 2008); Mark Johnson, *The Meaning of the Body: Aesthetics of Human Understanding* (Chicago: University of Chicago Press, 2007); Joli Jensen, *Is Art Good for Us?: Beliefs about High Culture in American Life* (Lanham, MD: Rowman Littlefield, 2002); Jher, "An Aesthetic Approach to the Constitutive Metamodel of Communication" (paper presented at the International Communication Association (ICA) Conference, London, UK, June 20, 2013); Richard Shusterman, *Body Consciousness: A Philosophy of Mindfulness and Somaesthetics* (Cambridge: Cambridge University Press, 2008); Scott R. Stroud, *John Dewey and the Artful Life: Pragmatism, Aesthetics, and Morality* (University Park, PA: Pennsylvania State University Press, 2011).

making in the world. "Aesthetics is properly an investigation of everything that goes into human meaning-making, and its traditional focus on the arts stems primarily from the fact that arts are exemplary cases of consummating meaning."[25]

Embodied Ethics

An example of embodied ethics is the *tetrad of media effects* as a mode of ethical inquiry. Johnson offers a "pragmatist account that stressed the role of habits and provided a non-absolutist view of moral deliberation as imaginative dramatic rehearsal."[26] This is all set in the context that our moral values have—typically—been understood as coming from a transcendent source independent of our embodied feelings and emotions.[27] According to Johnson, moral imagination can be understood as an aesthetically and morally grounded creativity for inquiring into emergent events, situations, and even objects of experience, engaging communication as a radical pragmatic turn of theory-practice as field, discipline, and praxis.

Additionally, McLuhan's tetrad of media effects is a mode of ethical inquiry and transformation; it is a way to engage our embodied experience in our social and cultural contexts. McLuhan asks four questions in relationship to a medium or media:

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[25] Johnson, *The Meaning of the Body*, xi.

[26] Thomas H. Bivins, *Mixed Media: Moral Distinctions in Advertising, Public Relations, and Journalism,* 2nd ed. (New York: Routledge, 2009); Jher, and Lauren Bratslavsky, "A Multidimensional Tetrad for the 21st Century" (paper presented at the McLuhan100: Then | Now | Next, International Marshall McLuhan Centenary Conference, University of Toronto, Ontario, Canada, November 8, 2011); Mark Johnson, "How Cognitive Science Changes Ethics," in *Moral Imagination: Implications of Cognitive Science for Ethics* (Chicago: University of Chicago Press, 1993), 1-12; Johnson, *Morality*; Humberto R. Maturana, *Metadesign* (Santiago, Chile: Instituto de Terapia Cognitiva (INTECO), 1997); Stroud, *John Dewey*; Francisco J. Varela, *Ethical Know-How: Action, Wisdom, and Cognition* (Stanford, CA: Stanford University Press, 1999); Mark Johnson, "III. Moral Theory and Ethics," Mark Johnson's University of Oregon homepage, accessed August 28, 2016, http://pages.uoregon.edu/markj/topic3.html.

[27] Johnson, "How Cognitive Science…."; Johnson, *Morality.*

1. What does the medium/media improve, *enhance*, amplify, intensify, gain, and/or accelerate?

2. What does the medium/media *obsolesce*, push aside, lose, and/or drive out of prominence?

3. What does the medium/media *retrieve*, recover, return, and/or bring back that was previously obsolesced?

4. What does the medium/media *reverse* into when pushed, gone too far, and/or flipped to the full limits or extremes of its power?[28]

Embodied Philosophy

Embodied philosophy builds upon findings in cognitive science, neuroscience, and psychology (as well as conceptual metaphor and image schema) positing four "E's" of the Embodied, Embedded, Enacted, and Extended (EEEE).[29] Embodied philosophy acknowledges an embodied organism in ongoing embeddedness within the environment and how it is enacted and extended into social and cultural milieus.

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[28] These tetrad questions are appropriated and remixed text from two of Marshall McLuhan's co-authored books and one film about him. The books are: *Laws of Media: The New Science* (Toronto: University of Toronto Press, 1988), coauthored with Eric McLuhan, and *The Global Village: Transformations in World Life and Media in the 21st Century* (New York: Oxford University Press, 1989), co-authored with Bruce R. Powers. Laurie Anderson notes another way of looking at the tetrad in Laurie Anderson, et al., *McLuhan's Wake* (New York: Disinformation Co., 2006): 1:30:07-1:30:23. Note that the tetrad of media effects can also be understood as a musical tetrachord performed as a contiguous and simultaneous whole.

[29] Antonio Damasio, *The Feeling of What Happens: Body and Emotion in the Making of Consciousness* (San Diego, CA: Harcourt Brace & Co., Inc., 1999); John Dewey, *Reconstruction in Philosophy*. Vol. 12, *The Middle Works* (Carbondale, IL: Southern Illinois University Press, 1920/1982); Dewey, *Experience and Nature*; Owen Flanagan, *The Really Hard Problem: Meaning in a Material World* (Cambridge, MA: MIT, 2007); Mark Johnson, *The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason* (Chicago: University of Chicago Press, 1987); Johnson, *The Meaning of the Body*; George Lakoff and Mark Johnson, *Philosophy in the Flesh: The Embodied Mind and its Challenge to Western Thought* (New York: Basic Books, 1999); Humberto R. Maturano and Francisco J. Varela, *Autopoiesis and Cognition: The Realization of the Living* (Dordrecht, Holland: D. Reidel Pub. Co., 1980); Jakob von Uexküll, "An Introduction to Umwelt," *Semiotica* 134.1-4 (2001): 107-110; Varela, Thompson, and Rosch, *The Embodied Mind,* 176.

The locus of embodied philosophy is an organism in ongoing interaction with its environment (embodiment), the structure and affordances of the environment. As such, "cognition depends upon the kinds of experience that come from having a body with various sensorimotor capacities, and ... these individual sensorimotor capacities are themselves embedded in a more encompassing biological, psychological and cultural context."[30] Embodied philosophy investigates the emergence of meaning arising from communicative practices (relationality) and its ties to community and participation. With these embodied, embedded, and enacted qualities of experience, it also examines how they are extended beyond the limits of the body-mind to external symbolic storage.

Feminism

Feminism "welcomes a plurality of perspectives" [31] and "focus[es] on the importance and usefulness of talk, connectedness, and relationships."[32] Ashcraft provides an explicit definition of feminism as "the dynamic, situated, embodied, and contested process of creating systems of gendered meanings and identities by invoking,

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[30] Varela, Thompson, and Rosch, *The Embodied Mind,* 176.

[31] Jane Addams, *Twenty Years at Hull-House, with Autobiographical Notes* (Chautauqua, NY: Chautauqua, 1911); Karen Ashcraft, "Feminist Organizational Communication Studies: Engaging Gender in Public and Private," in *Engaging Organizational Communication Theory and Research: Multiple Perspectives,* ed. Steve May and Dennis K. Mumby (Thousand Oaks, CA: SAGE Publications, 2005); Craig and Muller, *Theorizing Communication;* Robert T. Craig, "Communication Theory as a Field," *Communication Theory*, *9*, 2 (1999): 119-161; Mary Jo Deegan, *Jane Addams and the Men of the Chicago School, 1892-1918* (New Brunswick, NJ: Transaction Books, 1988); Charlene Haddock Seigfried, ed., "Deepening Democratic Transformation," in *Feminist Interpretations of John Dewey* (University Park, PA: Pennsylvania State University Press, 2002), 260-275.

[32] Cheris Kramarae, "Feminist Theories of Communication," in *International Encyclopedia of Communications, Vol. 2*, eds. Erik Barnouw, et al. (New York: Oxford University Press, 1989), 157.

articulating, and/or altering available discourses."[33] This definition aligns with an

embodied aesthetics approach.

Information

There is a multiplicity of definitions for information and documentation.[34] Typically, information is understood as data in computing systems (mathematical, semantic/representation, instructional), but in contemporary terms philosopher Luciano Floridi extends this legacy notion. He includes additional notions of information as environmental, physical, genetic, and neural and points to the emergent form of metadata (data of data). Documentarian Suzanne Briet defines document as "an unlimited horizon of physical forms and aesthetic formats for documents … push[ing] the boundaries of the field beyond texts to include any material form of evidence."[35] She also notes the

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[33] Ashcraft, "Feminist Organizational Communication Studies…," 154.

[34] J. C. R. Licklider, "Man-Computer Symbiosis," *Human Factors in Electronics, IRE Transactions on* HFE-1, no. 1 (1960): 4-11; Sun Joo Ahn, Jesse Fox, and Jeremy N. Bailenson, "Avatars," in *Leadership in Science and Technology: A Reference Handbook*, ed. W. S. Bainbridge (London: SAGE Publications, 2011); Jeremy N. Bailenson, Andrew C. Beall, Jack Loomis, Jim Blascovich, and Matthew Turk, "Transformed Social Interaction, Augmented Gaze, and Social Influence in Immersive Virtual Environments," *Human Communication Research* 31, no. 4 (2005): 511-37; Jim Blascovich and Jeremy Bailenson, *Infinite Reality: Avatars, Eternal Life, New Worlds, and the Dawn of the Virtual Revolution* (New York: William Morrow, 2011); Thomas H. Bivins and Julianne H. Newton, "The Real, the Virtual, and the Moral: Ethics at the Intersection of Consciousness," *Journal of Mass Media Ethics 18,* 3, (2003): 213-229; Hubert Dreyfus, "Virtual Embodiment and Myths of Meaning in Second Life" (paper presented to the Berkeley Big Bang 08, Berkeley Asian Art Museum and Film Archive, University of California at Berkeley, 2008); Luciano Floridi, *Information: A Very Short Introduction* (Oxford: Oxford University Press, 2010); Matthew Fuller, *Software Studies: A Lexicon* (Cambridge, MA: MIT Press, 2008); Jher, "Analogue–Digital–Virtual–Physical Media: From Convergence to Emergence" (Lecture-discussion, Huston School of Film and Digital Media, National University of Ireland, Galway, Ireland, June 25, 2013); Alan and Adele Goldberg, "Personal Dynamic Media," *IEEE Computer* 10, no. 3 (1977): 254-263; Norbert Wiener, *Cybernetics or Control and Communication in the Animal and the Machine* (New York: MIT Press, 1961); Rick Williams and Julianne H. Newton, *Visual Communication: Integrating Media, Art and Science* (New York: Lawrence Erlbaum Associates, 2006).

[35] Michael K. Bukland, "A Brief Biography of Suzanne Renée Briet," in Suzanne Briet, *What is Documentation?* trans. and eds. Ronald E. Day, Laurent Martinet, and Hermina G. B. Anghelescu (Lanham, MD: Scarecrow Press, 1951/2006).

multiplicities of techniques, technologies, and "documentary agencies," which engage them.[36]

Intellectual Property Law

This concept deals with issues related to how human beings encapsulate works of art and inventions within a regime of law.[37] Specifically, the concept of *open access* to information, especially in regards to the emerging educative uses of information, is of vital importance to a free society. Additionally, the concept of the *commons* in relationship to the hybridization of analogue, tangible, and digital *information* is brought to bear in the section on ecologies of emerging media.[38]

Meaning

Meaning has been understood as a relation to something that can stand as a sign for a subject and how it directs us to experience. More recently, meaning is about the embodied interactions and communicative practices of human beings in their interaction with the environment (e.g., science and art). As Johnson explains, "Meaning traffics in patterns, images, qualities, feelings, and eventually concepts and propositions."[39]

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[36] Ibid., v. Also see Ronald E. Day, Preface in *What is Documentation?*

[37] Lawrence Lessig, *Remix: Making Art and Commerce Thrive in the Hybrid Economy* (New York: Penguin Press, 2008); Martha C. Nussbaum, *Creating Capabilities: The Human Development Approach* (Cambridge, MA: Belknap Press of Harvard University Press, 2011); Cameron Colby Thomson and Marcin Jakubowski, "Toward an Open Source Civilization: Innovations Case Narrative: Open Source Ecology," *Innovations: Technology, Governance, Globalization* 7, no. 3 (2012): 53-70.

[38] Burns H. Weston and David Bollier, *Green Governance: Ecological Survival, Human Rights, and the Law of the Commons* (Cambridge: Cambridge University Press, 2013).

[39] Johnson, *The Meaning of the Body,* 9.

It is only within this environing experiential horizon that objects, events, and actions stand out for us and have the meaning they do. We do not experience isolated objects, isolated individual qualities, or isolated discrete actions. Objects and actions emerge in context and have their meaning via that particular context.[40]

Meaning is relational and intersubjective. Johnson further notes that "meaning is shaped by the nature of our bodies,"[41] and therefore, we require his notion of *embodied meaning* to adequately inculcate qualities of contextually bound interpenetrative interdependence. (Interestingly, this is mentioned by Ogden and Richards, "in terms of Practical Consequences … associated with the pragmatists."[42])

Medium and Media

Neil Postman once stated, "a medium is a technology within which a culture grows."[43] At increasing scale levels, a medium can emerge new states and tendencies, creating ever more complex phenomena for cross-disciplinary domains of inquiry [44] and

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[40] Mark Johnson, *Morality for Humans: Ethical Understanding from the Perspective of Cognitive Science* (Chicago: University of Chicago Press, 2014), 95. Noted by Johnson in this selection: David Eagleman, *Incognito: The Secret Lives of the Brain* (New York: Pantheon Books, 2001).

[41] Johnson, *The Meaning of the Body,* 9.

[42] C. K. Ogden and I. A. Richards, *The Meaning of Meaning: A Study of the Influence of Language Upon Thought and of the Science of Symbolism* (London: Ark Paperbacks, 1923/1985), 198.

[43] Neil Postman, "The Humanism of Media Ecology" (keynote address at the Inaugural Media Ecology Association Convention. Fordham University, New York, New York, June 16–17, 2000).

[44] Dewey, *Art as Experience*; Hannah Higgins, *Fluxus Experience* (Berkeley: University of California Press, 2002); Klaus Bruhn Jensen, "Intermediality," in *The International Encyclopedia of Communication,* ed. Wolfgang Donsbach (Malden, MA: Blackwell Publishing, 2008; Blackwell Reference Online, 2016); Jeremy D. Swartz, "Metamedia," Master of Science Thesis-Project, Interdisciplinary Studies. Presented at "Metaphi" in collaboration with the Jordan Schnitzer Museum of Art, University of Oregon, Eugene, OR, May 20, 2010; Robert Logan, "The Biological Foundation of Media Ecology," *EME: Explorations in Media Ecology* 6.1 (2007): 19-34; McLuhan and Gordon. *Understanding Media*; W. J. T. Mitchell and Mark B. N. Hansen, eds., *Critical Terms for Media Studies* (Chicago: University of Chicago Press, 2010).

narrowing the scope of medium to the means by which and/or through which something is expressed, communicated, or achieved.[45] Questions abound within the contextual dependent frames of who, what, where, when, why, and how a medium, media, meta-medium, and/or multimedia are described, utilized, and engaged. By identifying and clarifying the procession of a source material as medium, its multiplication into a media, meta (*with*), its representation as meta-medium—a computer (Kay), and its multiplication again as multimedia, (Licklider), performance—intermedia (Higgins) or *experiential art*, and transmedia storytelling (Jenkins) brings us to metamedia—emergent states of communication's evolution. This diversity and emergent definitions for medium and media (as environments) makes a holistic radial category analysis for these terms imperative for curational inquiry,

Metadiscourse

Metadiscourse creates a "communication culture."[46] It is where the "creative aspect and the institutional position" enable academic theory and research to be "open to contestation."[47] It defines research as theory-practice. The nexus between theory and strategic processes, event designs, and facilitations and interventions broadens practical applications in the field of communication, creating a comprehensive and dynamic

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[45] "medium," Oxford Dictionaries. Oxford University Press, accessed August 28, 2016, http://www.oxforddictionaries.com/definition/english/medium

[46] Robert T. Craig, "Metadiscourse, Theory, and Practice," *Research on Language and Social Interaction* 32.1 (1999): 21-29; Robert T. Craig, "Communication in the Conversation of Disciplines," *Russian Journal of Communication* 1.1 (2008): 7-24; Robert T. Craig, "Meta-discourse," in *The International Encyclopedia of Communication* (Vol. VII), ed. Wolfgang Donsbach (Malden, MA: Blackwell Publishing, Blackwell Reference Online, 2008); Robert T. Craig, "Practical Disciplines: Praxis, Inquiry, Metadiscourse" (paper presented to the Freud Centennial Academic Conferences workshop on "Knowledge, Practice, and Experience: Implications for Psychology," Clark University, Worchester, MA, October 4, 2009).

[47] Craig, "Metadiscourse, Theory, and Practice"; Craig, "Meta-discourse."

discipline. It is a discourse among discourses, where various communication theories and philosophical approaches can be placed into dialogue with one another. One exemplar is when Craig posited the constitutive metamodel of communication, which included rhetoric, semiotics, phenomenology, cybernetics, social psychology, socio-cultural theory, and critical theory.[48] Chris Russill subsequently retheorized Craig's metamodel as an eighth tradition of pragmatism.

This sounds remarkably similar to Klaus Krippendorff's redefinition of the concept of cybernetics. Norbert Wiener's original framing of cybernetics was

> of all ... anti-homeostatic factors in society, the control of the means of communication is the most effective and the most important. One of the lessons ... is that any organism is held together in this action by the possession of means for the acquisition, use, retention, and transmission of information.[49]

In 2012, Krippendorff updated his definition of cybernetics as "the inter-disciplinary discourse that brings together radically reflexive realities."[50]

Political Economy and Materiality

Political economy[51] combines "prescriptive and descriptive" forces recognizing spatialization and structuration.[52] Such analysis is a self-reflective process within a "four-square assumptive base" of *history*, *social totality*, *moral philosophy*, and *praxis*.[53]

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[48] See Appendix B: Constitutive Metamodel of Communication.

[49] Wiener, *Cybernetics…*, 160-161.

[50] American Society for Cybernetics Conference and Bateson Idea Group: An Ecology of Ideas, Asilomar Conference Center, California, 2012.

[51] Graham Murdock and Peter Golding, "Theories of Communication and Theories of Society," *Communication Research* 5 (1978): 339-356; Harold Adams Innis, *The Bias of Communication* (Toronto:

The foundational frameworks of classical political economy derive partially from the enlightenment critique of philosophers' *idealism* to David Ricardo, John Stuart Mill, and Adam Smith's *moral philosophy* (justice, equality, and the public good). Subsequently, Marx and Engels added a focused political dimension of *power relations* by analyzing *historical materialism* through the dynamics of *social change*, institutional control, market centralization, and the division of *labor* including reciprocal concepts of *superstructure* (ideas/mental labor, abstracted) and *base* (material labor, physical).

Other notable issues are the conceptualization of *individuals* (as a primary unit), *private properties* within *markets*, and functions of the *State* enacted in rapidly expanding conditions of spatiotemporal contexts. Critical political economy of media can also be understood through the lens of Harold Innis's conceptualization of *staples theory* and its successor *medium theory*. Even John Dewey notes the problematics of

> conceptual orthodoxies in political economy, politics and law. … Blind
>
> empiricism—which thinks that the task of social inquiry is fulfilled by collecting,

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University of Toronto Press, 1951/1991); Eileen R. Meehan, Vincent Mosco, and Janet Wasko, "Rethinking Political Economy: Change and Continuity," *Journal of Communication* 43.4 (1993): 347-358; Vincent Mosco, "Political Economy of Media," in *The International Encyclopedia of Communication,* ed. Wolfgang Donsbach (Malden, MA: Blackwell Publishing, Blackwell Reference Online, 2008); Mosco, *The Political Economy*, 2nd ed.; Graham Murdock, "Legacies and Debates. Political Economies as Moral Economies: Commodities, Gifts, and Public Goods," in *The Handbook of Political Economy of Communications*, eds. Janet Wasko, Graham Murdock and Helena Sousa (Malden, MA: Wiley-Blackwell, 2011), 13-44; Janet Wasko, "The Political Economy of Communications," in *The SAGE Handbook of Media Studies,* ed. John D. Downing (London: SAGE Publications, 1996), 309-329; Robert T. Craig, "The Materiality of Communication and Practical Theory" (paper presented at the European Communication Research and Education Association (ECREA) Lisbon, Portugal, November 13, 2014); Janet Wasko, Graham Murdock, and Helena Sousa, eds. *The Handbook of Political Economy of Communications.* (Malden, MA: Wiley-Blackwell, 2011).

[52] Mosco, *The Political Economy*.

[53] Meehan, Mosco, and Wasko, "Rethinking…."

classifying and pigeon-holing, sometimes quite literally in safety deposit vaults, a

sufficient number of facts—a sort of worship of fact-finding.[54]

Also see Ecology.

Pragmatism

Philosopher Mark Johnson states that pragmatism "is about discerning the full

meaning of experience and transforming experience for the better."[55] Pragmatism can be

understood as an integrative account of experience in relationship to a methodologically

pluralistic approach that leads to meliorism, that is, solving problems.[56] Communication

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[54] John Dewey, "Methods in Philosophy and the Sciences," in Vol. 17, *The Later Works*, 1925-1953 (Carbondale, IL, Southern Illinois University Press, 1937/2008), 445. ["Paper read at The Conference on Methods in Philosophy and the Sciences, New School for Social Research, New York, N.Y., 22-23 May 1937. Stenographic report in the Horace M. Kallen Papers, folder 95, Yivo Institute for Jewish Research, New York, N.Y."]

[55] Johnson, *The Meaning of the Body,* 282.

[56] James W. Carey, "Technology as a Totem for Culture, and a Defense of the Oral Tradition," *American Journalism* 7.4 (1990): 242–51; Robert T. Craig, "Communication as a Practice," in *Communication as ...: Perspectives on Theory*, eds. Gregory J. Shepherd and Jeffrey St. John (Thousand Oaks, CA: SAGE Publications, 2006); Craig, "Pragmatism in the Field…," 125-145; Robert T. Craig, "Reflection on 'Communication Theory as a Field.'" *Revue Internationale de Communication Sociale et Publique* 2 (2009): 7-11; François Cooren, "Pragmatism as Ventriloquism: Creating a Dialogue among Seven Traditions in the Study of Communication," *Language Under Discussion* 2.1 (2014): 1-26; Dewey, *Experience and Nature;* Larry A. Hickman, *John Dewey's Pragmatic Technology* (Bloomington, IN: Indiana University Press, 1990); William James, *Pragmatism, A New Name for Some Old Ways of Thinking* (New York: Longmans Green and Co., 1907); Carolyn Marvin, "Reconsidering James Carey: How Many Rituals Does it Take to Make an Artifact?" *American Journalism* 7.4 (1990): 216-26; George Herbert Mead, *Mind, Self and Society*. (Chicago: The University of Chicago Press, 1934/1979); Charles Sanders Peirce, *Philosophical Writings of Peirce* (New York: Routledge, 1955); Mats Bergman, *Peirce's Philosophy of Communication: The Rhetorical Underpinnings of the Theory of Signs* (London: Continuum International Publishing, 2009); Mats Bergman, "Pragmatism as a Communication-theoretical Tradition: An Assessment of Craig's Proposal," *European Journal of Pragmatism and American Philosophy*, *4*(1) (2012): 208-221; John Durham Peters, *Speaking into the Air: A History of the Idea of Communication* (Chicago: University of Chicago Press, 1999); Chris Russill, "Toward a Pragmatist Theory of Communication" (PhD diss., Pennsylvania State University, 2004); David K. Perry, *American Pragmatism and Communication Research* (Mahwah, N.J.: L. Erlbaum, 2001); Jeremy D. Swartz (organizer), "Communication and Pragmatism: 100 Years Later Returning to Chicago" (panel at the National Communication Association (NCA) 100th Annual Convention, Chicago, Illinois, November 22, 2014).

scholars Robert T. Craig[57] and Chris Russill[58] have posited that pragmatism is a

conceptual schema by which the constitutive metamodel of communication should be

ultimately understood, again, in relationship to a variety of communications theories

leading to problem solving. See Metadiscourse.

Technology

       The term has its origins in the Greek *technē*, typically defined as the practical arts

or craftsmanship ("broad activities of making or doing"[59]) and set apart from *poiesis* or

high art.[60] Martha Nussbaum enlarges *technē* to include "a deliberate application of

human intelligence to some part of the world, yielding some control over *tuchē* (chance

or contingency); it is concerned with the management of need and with prediction and

control concerning future contingencies."[61]

       Larry Hickman urges an even more expansive notion of technology, rather than

merely tools, as a richer notion of the technological in our lives. He defined it as "*the*

invention, development, and cognitive deployment of tools and other artifacts, brought to

bear on raw materials and intermediate stock parts, with a view to the resolution of

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[57] Craig, "Communication as a Practice…."; Craig, "Pragmatism in the Field…."; Craig, "Reflection …."

[58] Russill, "Toward a Pragmatist Theory…."

[59] Larry Hickman, *Philosophical Tools for Technological Culture: Putting Pragmatism to Work* (Bloomington, IN: Indiana University Press, 2001), 43.

[60] For more of Dewey's account in previously unpublished work, see John Dewey and Phillip Deen, *Unmodern Philosophy and Modern Philosophy* (Carbondale, IL: Southern Illinois University Press, 2012), 242-246.

[61] Martha Nussabaum, *Fragility of Goodness: Luck and Ethics in Greek Tragedy and Philosophy* (Cambridge: Cambridge University Press, 1986), 94.

perceived problems" [italics in the original].[62] Johnson fuses Nussbaum, Hickman, and

Dewey when he states,

> There are also technologies in which the ends are not determinately specified in
>
> advance, and where ends-in-view can change through the operation of an
>
> intellectual technology to help us work through a problematic situation,
>
> transforming it for the better. Larry Hickman (1990) has championed this broad,
>
> expansive reading of Dewey's treatment of technology as incorporating methods
>
> of intelligent inquiry and problem-solving in all domains of human life.[63]

In the same way, James W. Carey offered an ethical treatment of technology in the way

he addresses the nondualistic quality of value making about technology and technology

itself.

> We have available to us no ethics or values or morals or purposes with which to
>
> judge technology because our notions of value, morality, and purpose have been
>
> forged in the same cultural container with the technology. Technology and value
>
> are merely two sides of the same coin.[64]

Correspondingly, Johnson expounds and restates the perspective presented by Dewey

sixty years before Carey:

> I do not think it is reductivist to see moral knowledge as a form of technology ...
>
> in its very broadest sense ... as any intelligent, skillful means for transforming
>
> experience. This is the expansive sense in which Dewey understood the term: "all
>
> the intelligent techniques by which the energies of nature and [humans] are

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[62] Hickman, *Philosophical Tools,* 26, 42, 43.

[63] Johnson, *Morality,* 228.

[64] Carey, "Technology as a Totem," 250.

directed and used in satisfaction of human needs; it cannot be limited to a few outer and comparatively mechanical forms."[65]

It is important to note that even greater extensions to the concept of technology have taken form as biology as noted by Sandra Braman, who engages the concept of recombinant DNA as a meta-technology.[66] Finally, other media studies and communication scholars understand biology as media/technology, including Eugene Thacker[67] and others.[68] Auspiciously, Robert H. Carlson categorically states, "biology is the *oldest* technology" [italics in original].[69]

Overview

The following section presents brief overviews of the chapters in this dissertation.

Chapter I: Introduction

This chapter introduces the topic of curation, the dissertation's research questions, theories and methods utilized, and a literature review with definitions. It also includes this overview of the dissertation.

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[65] Johnson, *Morality*, 227-8; John Dewey, "What I Believe," in *The Later Works. Vol. 5, 1929-1930,* ed. Jo Ann Boydston (Carbondale, IL: Southern Illinois University Press, 1930/1984), 270.

[66] Sandra Braman, "The Meta-Technologies of Information," in *Biotechnology and Communication: The Meta-technologies of Information*, ed. Sandra Braman (New York: Routledge, 2004), 5.

[67] Eugene Thacker, *Biomedia* (Minneapolis, MN: University of Minnesota Press, 2004).

[68] Institute of Electrical and Electronic Engineers, *IEEE Transactions on Molecular, Biological, and Multi Scale Communications,* 2015.

[69] Robert H. Carlson, *Biology is Technology: The Promise, Peril, and New Business of Engineering Life* (Cambridge, MA: Harvard University Press, 2010), 1.

Chapter II: What Is Media?

This chapter defines and discusses terms central to this project, including medium, media/technology, new media, and metamedia. We need an integrative account of media to illustrate the crossroads where media studies as a discipline finds itself in 2016. An environment and media are not only becoming more integrated; some believe they were never separate to begin with. This grand survey states the larger issue that there are radical changes occurring in media, and they are transforming our lives. What is happening in media? There were notions of curation that were appropriate at a particular time period, but we need to rethink curation today. Curation is the mode of selection, a method of corralling, turning a cacophony (chaos) into symphony (order) for new modes of inquiry to emerge.

Chapter III: Changing Material Practices

This chapter explores changing material processes. We need intelligent inquiry and new modes of engagement. This chapter presents examples of how a curatorial mode of inquiry plays out concretely in people's lives and responds to RQ2: How have material enactions of a curational approach been utilized by various civic (affairs and engagement) innovation institutions in the past? This question is answered by three exemplars from a century ago: Jane Addams and Ellen Gates Starr's Hull-House and Museum, the 1893 World's (Fair) Columbian Exposition, and the collaboration between John Dewey and Albert Barnes at the Barnes Foundation. All these exemplars continue today.

This dissertation includes these three exemplars of material practices that provide evidence of an applied approach. A way to illustrate this is through praxis (theory-

practice) or in other words the embodied enaction of a curatorial approach. In designing not merely the relationships of these concepts/artifacts to one another or the pedagogical approaches necessary to recognize a multimodal notion of curation, I offer my integrative framework of curation as meliorative—caring and repair. Clifford Geertz acknowledges an integrative network in much the same way, when he states

> Man is an animal suspended in webs he himself has spun. I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretive one in search of meaning.[70]

Chapter IV: Emergent Media

This chapter illuminates previous conceptions that are not adequate to emergent media. We have a problematic situation: traditional notions of communication and media are being radically transformed. Thus, we need a notion of metamedia and a new understanding of curation, an enacting and cultivating of care, curing, healing, repair, and restoration. This chapter engages RQ3: How are material enactions of a curational approach being utilized in various forms of "emergent media"? This question is answered with brief contemporary examples and their significance.

Chapter V: Communication, Pragmatism, and Aesthetics

This chapter elaborates communication and aesthetics along a Pragmatist line. It is an orientation to medium/media that embraces an *embodied aesthetics* and *embodied ethics* framework and helps us to rethink these notions in light of changing materials,

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[70] Clifford Geertz, *The Interpretation of Cultures: Selected Essays* (New York: Basic Books, 1973), 5.

concepts, and practices. This chapter is a response to Robert T. Craig's call for an aesthetic tradition and François Cooren's call for a conceptual framing of embodiment.

Chapter VI: A New Notion of Curation and Conclusions

This chapter presents an overview and consummations to this dissertation with brief indications of where research question responses were discussed. It includes a general discussion of new notions of curation and its relation to communication, embodied meaning, and praxis and more detailed reflections on various aspects and issues related to curation. The chapter ends with conclusions and implications for the future. This dissertation has brought forward marginalized resources of embodied cognition in communication theory to revitalize and ecologize communication theory-practice. The chapter addresses RQ4: How does the political-economic structure of these material enactions of various curational approaches reflect, remake, and repair societal values? This question and the answers represent an enactment of the embodied significance and ethics of this study.

CHAPTER II

WHAT IS MEDIA?

The imagination is the medium of appreciation in every field. The engagement of the imagination is the only thing that makes any activity more than mechanical. Unfortunately, it is too customary to identify the imaginative with the imaginary, rather than with a warm and intimate taking in of the full scope of a situation.

—John Dewey[71]

All that media stuff is all very irrelevant. If people come to a concert and don't like it, they don't come again.

—Roger Waters from Pink Floyd[72]

This chapter opens the Pandora's box of the definitions of media, setting up an interdisciplinary discussion of the radical changes that are occurring in its conceptualization. It begins with a general discussion of the process of defining media before more detailed definitions of medium, media, and intermedia are explored. The chapter is a necessary foundation for discussions of emergent media (metamedium, multimedia, transmedia, and metamedia) in Chapter IV.

But why ask the question what is medium/media to begin with? There are many ways to answer this question; however, recent interviews conducted with scholars and practitioners revealed an inability for many to define the term in a truly holistic sense.

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[71] John Dewey, *Democracy and Education,* in Vol. 9 of *The Middle Works, 1899-192.* Edited by Jo Ann Boydston (Carbondale, IL: Southern Illinois University Press, 1916/1980), 244.

[72] Pink Floyd (musical group), Adrian Maben, Willy Kurant, Gaborá Pogány, Universal Music & Video Distribution. *Live at Pompeii: The Director's Cut.* Santa Monica, CA: Hip-O Records, 2003.

Indeed, the bewilderment of interviewees was striking when asked this simple question. This situation will be elaborated further at the end of this chapter and more substantially at the end of Chapter VI. However, it seems obvious that there still is a need to fully explore these definitions.

The Process of Defining Media

This chapter presents an orientation to media as a melding of communication, art, science, law, philosophy, and music vis-à-vis a pluralistic account of theory and practice. The terms "a media" or "the media" rely on established and emerging multilayered approaches including disciplinarity (e.g., art, journalism, and communications), interdisciplinarity (comparing and contrasting between disciplines), and/or transdisciplinarity (transformation and cross-fertilization across disciplines).

Wide-ranging interpretations of the terms' diverse and even conflicting definitions elicit and challenge the very meanings and practices embodied in the terms themselves. Throughout this dissertation it may seem like I am attempting to nail down the meanings of these terms to find universal definitions. Nothing could be further from the reality of the situation. Instead, the plurality of responses and points of view for each of the terms is meant to draw attention to the ambiguous and contextually dependent nature of their uses. Therefore, think of these terms not merely in a hierarchy of concepts or a network of interrelations only but in interpersonal, serial, centralized, radial, decentralized, and circularly participative ways—just to name a few frames.

In general, questions abound within the contextual dependent frames of who, what, where, when, why, and how a *medium*, *media*, and *intermedia* are described,

utilized, and engaged. By identifying and clarifying the procession of source material as medium, its combination as a thing-process as media, its experiential qualities as intermedia, its abstraction into a metamedium, and multiplication again as a multimedia, new media, and transmedia then encompass emergent states of communication's evolution.

An epistemological inquiry could include many methods: a philosophy of language to map effectively the scope and scale of an endeavor, pattern recognition/mapping, and a means of aggregation/dissemination. To understand the meaning of media and its derivations, this project will primarily draw on *radial category analysis*[73] and various *spaces of meaning*,[74] including communication, art, science, computing, environment, and interstitial (middle ground) states.

It might also be noted that all interpretations of media share a ubiquitous frame that is wholly dependent on the speaker and/or hearer's perspective.

Medium

When people think of a "medium," the first conceptions are typically similar to some of the OED definitions, making sense of the term at a common sense level. The origin of the word "medium" is from the Latin meaning "middle." OED defines medium as a noun as follows:

1. An agency or means of doing something

    1.1. A means by which something is communicated or expressed

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[73] Lakoff, *Women, Fire…,* 5-10, 91-114, 287, 291.

[74] Flanagan, *The Really Hard Problem*.

2. The intervening substance through which sensory impressions are conveyed or physical forces are transmitted

    2.1. The substance in which an organism lives or is cultured

    2.2. Liquid (e.g. oil or water) with which pigments are mixed, with a binder, to make paint

3. A particular form of storage material for computer files, such as magnetic tape or discs

4. The material or form used by an artist, composer, or writer

5. (plural mediums) A person claiming to be in contact with the spirits of the dead and to communicate between the dead and the living

6. The middle quality or state between two extremes [e.g. temperature or waist size]; a reasonable balance[75]

But we need to embrace a more nuanced interdisciplinary conception, including other folk models that explain more complex and abstract notions, even though that may deepen the ambiguity and contextual frames. This space of meaning includes other framings, such as exchange (e.g., economics and money)[76] and measurement (e.g., container size). Additionally, medium can also be understood as art, painting, sculpture, and printmaking; material or empty space; a means of publishing, including broadcast, mass, news, print, recording, electronic; and (digital) computing.

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[75] "media, n.2," OED Online, June 2016, Oxford University Press, accessed August 8, 2016. http://www.oed.com.libproxy.uoregon.edu/view/Entry/115635.

[76] In reference to exchange, Dallas Smythe argued: "This is a transactionist view of the relation between mass media content and audience members (and producers, too)." Quoted in Thomas H. Guback, *Counterclockwise: Perspectives on Communication* (Boulder, CO: Westview Press, 1994), 61. Dewey writes about this notion as well, in John Dewey, 1923-1924, "Syllabus: Social Institutions and the Study of Morals," in Vol. 15 of *The Middle Works, 1899-1924*, ed. Jo Ann Boydston (Carbondale, IL: Southern Illinois University Press, 1923-1924/2008), 254.

Dewey's notion of medium from *Art as Experience* is as mediator, expressing distinct meanings and values as a preparatory or preliminary, and as a substance or a pallet of colors, lights, lines, sounds, words, and space.[77] For Dewey, "the artist has the power to seize upon a special kind of material and convert it into an authentic medium of expression."[78]

Another space of meaning can serve as a conduit towards an approach that aligns the life sciences and natural sciences and can actually become the bedrock by which the discipline of communication can be reconstituted.

Material exemplars of a medium in physics can be expressed as energy via the electromagnetic spectrum (which is expressed as electricity and light), waveforms, physical mass,[79] and networking.[80] Artist Gary Hill conceptualizes a medium in similar terms as substance, rhythm, and brightness of light and sound,[81] and (again) Dewey's color, space, and light. He claims that

> three qualities of space and time reciprocally affect and qualify one another in
> experience. Space is inane save as occupied with active volumes. Pauses are holes
> when they do not accentuate masses and define figures as individuals. Extension

[77] Dewey, *Art as Experience*, 204-206.

[78] Ibid., 204.

[79] Anthony Tekatch, "Electromagnetic Radiation Spectrum Chart," (Grimsby, Ontario: Unihedron, 2010); Julius Adams Stratton, *Electromagnetic Theory* (New York: Wiley, 2007); National Aeronautics and Space Administration, Science Mission Directorate, "Anatomy of an Electromagnetic Wave," Mission: Science website, 2010, accessed August 26, 2016. http://missionscience.nasa.gov/ems/02_anatomy.html; Manish Agrawal, *Business Data Communications* (Hoboken, NJ: Wiley, 2011).

[80] Jerry FitzGerald, Alan Dennis, and Alexandra Durcikova, *Business Data Communications and Networking. 11th ed.* (Hoboken, NJ: John Wiley, 2012).

[81] Maria Anna Tappeiner, Reinhard Wulf, Gary Hill, Westdeutscher Rundfunk, and Films for the Humanities & Sciences, *Gary Hill: I Believe It Is an Image.* Video Artists Video Art. (Princeton, NJ: Films for the Humanities & Sciences, 2004).

sprawls and finally benumbs if it does not interact with place so as to assume intelligible distribution. Mass is nothing fixed. It contracts and expands, asserts itself and yields, according to its relations to other spatial and enduring things. While we may view these traits from the standpoint of form, of rhythm, balance and organization, the relations which thought grasps as ideas are present as qualities in perception and they inhere in the very substance of art.[82]

One example is McLuhan's idea of an electric light bulb as information, a visual waveform.

Other sciences define a medium similarly; for example, in biochemistry and molecular biology it is the physical environment by which "chemical entities and their reactions are studied."[83] And in biological terms a "culture medium" is any nutrient medium and material used and designed to support the growth or reproduction of microorganisms or the maintenance of a culture for cells, tissues, or organs.[84] Williams

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[82] Dewey, *Art as Experience*, 217.

[83] "medium," in Oxford Dictionary of Biochemistry and Molecular Biology, ed. Richard Cammack, Teresa Atwood, Peter Campbell, Howard Parish, Anthony Smith, Frank Vella, and John Stirling (Oxford: Oxford University Press, 2006).
http://www.oxfordreference.com/view/10.1093/acref/9780198529170.001.0001/acref-9780198529170-e-12049.
"medium (pl. media or mediums)
1 the surrounding substance in which organisms or cells are studied or preserved.
2 the continuum in which particular chemical entities and their reactions are studied, commonly the solvent together with any nonreacting solutes.
3 any of the materials in which a chromatographic or an electrophoretic separation is effected.
4 the continuum through which electromagnetic radiation is considered to be transmitted.
5 see culture medium."

[84] "culture medium," in Oxford Dictionary of Biochemistry and Molecular Biology, ed. Richard Cammack, Teresa Atwood, Peter Campbell, Howard Parish, Anthony Smith, Frank Vella, and John Stirling (Oxford: Oxford University Press, 2006).
http://www.oxfordreference.com/view/10.1093/acref/9780198529170.001.0001/acref-9780198529170-e-4424; "culture medium," in *A Dictionary of Biology*, ed. Hine, Robert, and Elizabeth Martin (Oxford: Oxford University Press,
http://www.oxfordreference.com/view/10.1093/acref/9780198714378.001.0001/acref-9780198714378-e-1105.

and Newton note the biological phenomena of human beings "who can see, speak, hear, smell, touch, and taste. ... The mind is indeed the ultimate medium."[85] They also postulate that "the ultimate new medium may be cloning."[86]

Additionally, it is worthwhile to note from a computer science oriented approach, a medium can be considered the text-based code, algorithmic source (data or information), for a programming language that utilizes a medium in the "storage medium" (e.g., paper or hard drive) for archiving, processing, and extrapolating data and information,[87] which we will later describe as a multimedia and metamedium.

Another aspect of medium is the interstitial or "a middle quality, degree, or condition."[88] However, confusion arises within artistic, scientific, and communicatory domains related to medium in its alternative usage as data or information, which generates criteria and material for (critical) interpretation, analysis, and/or consumption-production.

Medium also can be defined as environment.[89] Again, as Neil Postman stated, "a medium is a technology within which a culture grows."[90] At increasing scale levels, a medium can emerge new states and tendencies, creating ever more complex phenomena,

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[85] Williams and Newton, *Visual Communication,* 386-387

[86] Ibid., 371.

[87] "medium, n. and adj.," *OED Online*. June 2016 (Oxford: Oxford University Press), accessed August 27, 2016. http://www.oed.com.libproxy.uoregon.edu/view/Entry/115772.

[88] Ibid.

[89] Chris Park and Michael Allaby, "medium," in *A Dictionary of Environment and Conservation* (Oxford: Oxford University Press, 2013). http://www.oxfordreference.com/view/10.1093/acref/9780199641666.001.0001/acref-9780199641666-e-4882. "medium (pl. media) A substance through which something is transported, such as air or water, and through which contaminants are distributed."

[90] Postman, "The Humanism of Media Ecology."

such as multimedia and intermedia, which will be discussed later in this chapter. Narrowing the scope of medium to the means by which and/or through which something is expressed, communicated, or achieved[91] will act as a preliminary assumption in this inquiry.

McLuhan's Account of Medium/Technology

When defining medium, McLuhan's dictum from *Understanding Media: The Extension of Man*, "the medium is the message," seems often to be misunderstood and must be reconsidered.

> the medium is the message … the personal and social consequences of any **medium**—that is, of any **extension** of ourselves—result from the new scale that is introduced into our affairs by each extension of ourselves, or by any new **technology**.[92] [emphasis added]

He continues, "the content of any medium is always another medium. The content of writing is speech, just as the written word is the content of print, and print is the content of the telegraph."[93] So, it is important to note the synonymous relationships between medium, extension, message, content, and technology and that it is not merely about content, as in the content of television is a program or the content of film is a scene. Most critically, "For the 'message' of any medium or technology is the change of scale,

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[91] "medium," Oxford Dictionaries, Oxford, Oxford University Press, accessed August 28, 2016. http://www.oxforddictionaries.com/definition/english/medium.

[92] McLuhan and Gordon, *Understanding Media*, 19.

[93] Ibid., 19.

or pace, or pattern that it introduces into human affairs."[94] For example, the Internet as a medium or technology transformed the scale, pace, and pattern of previous legacy media, while simultaneously integrating them into a unified form. (More on this in Chapter IV.) "This fact merely underlines the point that 'the medium is the message' because it is the medium that shapes and controls the scale and form of human association and action."[95]

On a similar note, at a certain fateful point in history, there was a turn away from Deweyan pragmatist insights dealing with inclusive notions of aesthetics, body-mind, medium, media, communication, and information. One brief example of a return to this integrative frame is Oxford University philosopher Luciano Floridi's appropriation of Marshall McLuhan's dictum "the medium is the message." Floridi reinforces the biological account of medium when he states, "Genes do not contain information like envelopes or emails do, nor do they describe it, like a blueprint; they are more like performatives." He continues, "in the genetic code, the medium (the genes) are the message."[96] This illustrates that a careful reading of McLuhan and others[97] is necessary, and that his transdisciplinary conceptualization of a medium and media and its application, as Floridi states, as "biological information"[98] is more critical now than ever

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[94] Ibid., 20.

[95] Ibid., 20.

[96] Floridi, *Information,* 80.

[97] Kenneth Weiss, "Is the Medium the Message? Biological Traits and Their Regulation," *Evolutionary Anthropology: Issues, News, and Reviews 11*(3) (2002): 88-93; Robert K. Logan, "The Biological Foundation of Media Ecology," *Explorations in Media Ecology* 6(1) (2007): 19-34; Robert K. Logan, "The Medium is the Message is the Content: Meaning, Media, Communication and Information in Biosemiosis and Human Symbolic Communication," *Explorations in Media Ecology* 7(3) (2008): 213-224.

[98] Floridi, *Information,* 74

in an era of inforgs.[99] McLuhan and Floridi, each in their own way, posit a medium as biological.

To conclude this section, Figure 2 presents a summary of this discussion through an illustration of an interdisciplinary reconceptualization of medium that includes legacy notions via communication, the arts, and computer science and connections to the physical, natural, and life sciences. In understanding a medium via this cross-modal placement in a radial category, its connections become more apparent, inclusive, and timely.
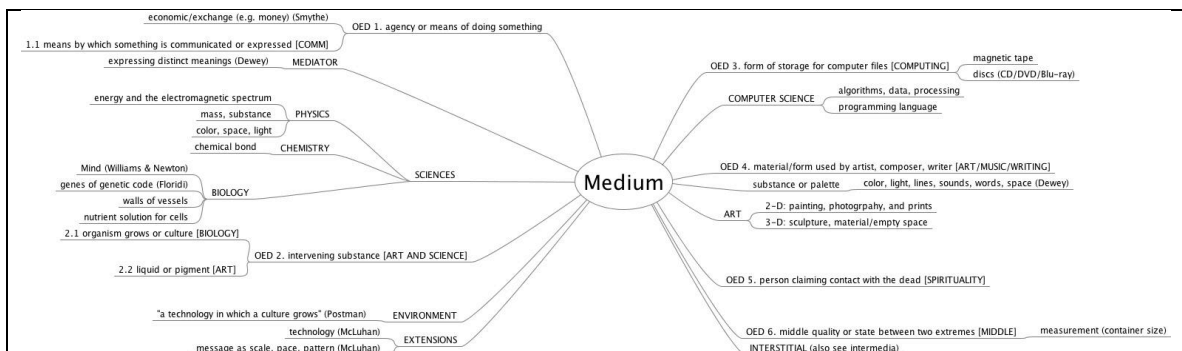
Figure 2. An illustration of a radial category analysis of the term *medium*.

Media

> It is important that creative thinkers not be restricted by traditions of art, communication media, and science … exploring new ways of thinking, creating, and working, as well as new ways to understand all media.
>
> —Rick Williams and Julianne H. Newton[100]

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[99] Luciano Floridi, *The Cambridge Handbook of Information and Computer Ethics* (Cambridge, UK: Cambridge University Press, 2010), 11.

Having discussed definitions of medium, we can now interrogate its plural form, in other words, what is media? When people are asked, "What does media mean to you?" in informal discussions, the overarching answer typically involves two main conceptualizations: the first is "the media" implying mass media (e.g., news programs, book publishing, and computer animation). McQuail defines mass media in a similar way as "the organized means of communication openly, at distance, and to many in a short space and time."[101] Whereas, mass communication is "all types and processes of communication that are extensive, public and technically mediated."[102] The second conceptualization is the different associations with fine art (e.g., installation art, pigments for paintings, materials for sculpture, and internet-based art) and is sometimes convoluted and confused with the definition of a medium.

These common understandings can be compared and contrasted with the OED definition of media: "1. The main means of mass communication, *esp.* newspapers, radio, and television, regarded collectively; the reporters, journalists, etc., working for organizations engaged in such communication. 2. *Computing.* A physical object (as a disk, tape cartridge, etc.) used for the storage of data."[103] It becomes apparent that the basic level of both medium and media is satisfied by a variety of prototypical elements, which act as propositional models. For example, the image-schemas for "art media" would include drawing, painting, printmaking, and sculpture. "Computing media" would

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[100] Williams and Newton, *Visual Communication,* 378.

[101] Denis McQuail, *McQuail's Mass Communication Theory*. 6th ed. (London: SAGE Publications, 2010), 4.

[102] Ibid., 5.

[103] "media, n.2," *OED Online*.

include, for example, magnetic storage (hard drives), processors (silicon chips), semiconductors (random access memory or RAM), and more.

Media comes from the Latin plural of medium. In terms of usage, OED explains: "in the sense [of] 'broadcasting and the press, collectively,' media behaves as a collective noun (like staff or clergy, for example), which means that it is now acceptable in standard English for it to take either a singular or a plural verb."[104] The definition also highlights the fact that, "the treatment of *media* as a singular noun is spreading into the upper cultural strata."[105]

Traditionally, the media actuated a one-way directionality with the consumer. Media is now a renewable resource for reframing, remixing, and reimagining content and messages. The "press collectively," also termed "the media,"[106] intertwines relationships between, across, and beyond communication industries writ large. It is these interdependencies and synergies that exist with and within journalism, advertising, marketing, public relations, and entertainment[107] that operate at a state of integration previously noted above as the Internet—or in other words, our new "the media."

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[104] "media," *Oxford Dictionaries* (Oxford: Oxford University Press), accessed August 28, 2016. http://www.oxforddictionaries.com/us/definition/american_english/media.

[105] "media, n.2," *OED Online*. June 2016 (Oxford: Oxford University Press), accessed August 27, 2016. http://www.oed.com.libproxy.uoregon.edu/view/Entry/115635.

[106] "media," Oxford Dictionaries.

[107] Philip Young, "Measuring the Impact of Social Media on PR Practice," *Online forum. Association for Measurement and Evaluation of Communication (AMEC)*, November 2006. Cited in Jim Macnamara, *The 21st Century Media (r)evolution: Emergent Communication Practices* (New York: Peter Lang, 2010), 316. Also see Jim Macnamara, "Public Communication Practices in the Web 2.0-3.0 mediascape: The Case for PRevolution," *PRism* 7, no. 3 (2010): 1-13.

Dewey's notion of media from *Art as Experience* is a means to merge, express, and carry definite parts[108]: actors, voices, and gestures. Form is enacted as the interpenetration of shape and pattern with color, space, and light, which will be discussed further in Chapter III in relation to the Barnes Foundation. As such, "media and effect are completely fused."[109] Dewey's framing enacts a container logic for media that today would include both organic and artificially created forms and the means to express and carry their parts. "In great art [and communication], there is no limit set to the individualization of parts within parts." [110]

The interchangeability of the term *medium* and its plural form *media* and *technology* is emphasized in McLuhan's work, as noted in the previous section. Subsequently, the *International Encyclopedia of Communication* defines media as "the range of *tools* that humans have used throughout history to communicate with each other about a shared reality … modern *technologies*—from the printing press to the Internet— which facilitate communication across space, time, and social collectives."[111] In a more experiential academic context at the *What Is Media?* conference experience, scholars defined media as an even wider array of objects, processes, and approaches. These responses will be discussed at the end of Chapter VI.

Examples of other meanings that cluster around the term media include, but are not limited to, cash or credit card (economic media), chalk and chalkboard (educational media), mediation (e.g., dispute resolution), and media-n (measurement pertaining to

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[108] Dewey, *Art as Experience*, 209, 205.

[109] Ibid., 203.

[110] Ibid., 208-209.

[111] Klaus Bruhn Jensen, "Media," in *The International Encyclopedia of Communication*, ed. Wolfgang Donsbach (Malden, MA: Blackwell Publishing, 2008; Blackwell Reference Online, July 31, 2016).

geometry, or the middle of a road). Additionally, "points are pixels ... and electrons ... form the basis of wireless communication."[112] Digital, computerized, interactive, manipulable, and networked information—in other words, "new media"—will be explicated in greater depth in Chapter IV.

In extending these notions again to the sciences, media can be understood as the organization of energy and material interactions that form patterns of enaction. When considering the physics or physical characteristics of a given media, the organization of energy interactions, patterns of enaction, patterns of information, and communication itself, whether verbal language, nonverbal language, or mass communication, can be seen as media or in this way as a system to carry different parts.

A "biological medium" would include anything found in nature but especially liquids (such as water) or gels designed to cultivate bacteria, cell cultures, tissue cultures, organ cultures, and yeast, to name a few.[113] A petri dish is one of the best examples of the environment in which to cultivate these growths. Wikipedia defines five types of biological media as nutrient, minimal, selective, differential, and transport media. Extending this notion, Williams and Newton offer a deep reflection:

Although living organisms are "old media," the idea of living organisms as forms of media is an unconventional idea in design and visual communication studies.

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[112] Williams and Newton, *Visual Communication,* 373.

[113] John Lackie, "medium," in *A Dictionary of Biomedicine* (Oxford: Oxford University Press, 2010). http://www.oxfordreference.com/view/10.1093/acref/9780199549351.001.0001/acref-9780199549351-e-5827; "culture medium," in *Oxford Dictionary of Biochemistry and Molecular Biology*, ed. Richard Cammack, Teresa Atwood, Peter Campbell, Howard Parish, Anthony Smith, Frank Vella, and John Stirling (Oxford: Oxford University Press, 2006). http://www.oxfordreference.com/view/10.1093/acref/9780198529170.001.0001/acref-9780198529170-e-4424; Carl Schaschke, "medium," in *A Dictionary of Chemical Engineering* (Oxford: Oxford University Press, 2014). http://www.oxfordreference.com/view/10.1093/acref/9780199651450.001.0001/acref-9780199651450-e-1816.

So, let's include the cells of living things in our description. ... Think of cells as living equivalents of [2D] pixels [or better yet, 3D voxels] in the new media of the body. Therefore, in general, "the body actually becomes a form of electronic media."[114]

They continue by stating, "the real new (and old) medium is the self. As an evolving entity influenced by biology and culture, each of us moves through life creating and responding to the many forms of media we encounter, including other humans."[115] More emphasis will be placed on this point in later chapters, when discussing biomedia and bioart.

Additionally (and not to be underestimated), "astronomical media" would be typical films and online materials about astronomy while "interplanetary medium," "interstellar medium," and "intergalactic medium" would include everything from asteroids, comets, and planets and their components, including but not limited to atoms, cosmic rays from solar winds, dust, gas, hot plasma, magnetic fields, and molecules.[116]

Figure 3 offers a summary of this section and an illustration of an interdisciplinary reframing of media. This integrative account of media through radical category analysis includes legacy notions of "the media" as mass communication/media, tools as technologies, and computing apparatuses, as well as form in art and especially

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[114] Williams and Newton, *Visual Communication,* 373-374.

[115] Ibid., 386-387.

[116] For a discussion of interstellar medium, see http://www-ssg.sr.unh.edu/ism/what1.html. For interplanetary medium, see Amy Tikkanen. *Encyclopaedia Britannica*, 8th ed., s.v. "Interplanetary Medium" (Chicago: Encyclopaedia Britannica, 2009), accessed August 2, 2016. https://www.britannica.com/topic/interplanetary-medium. For intergalactic medium, see Piero Madau, "Intergalactic Medium," in *Encyclopedia of Astronomy and Astrophysics,* ed. Paul Murdin (Bristol, Philadelphia, London, New York: Institute of Physics Publications: Nature Pub. Group, 2001) http://www.astro.caltech.edu/~george/ay21/eaa/eaa-igm.pdf. Additionally, astronomical media is discussed at http://www.astro.caltech.edu/palomar/media/astromedia.html.

associations and networks to the physical and biological sciences, which includes bio-media and bio-art.
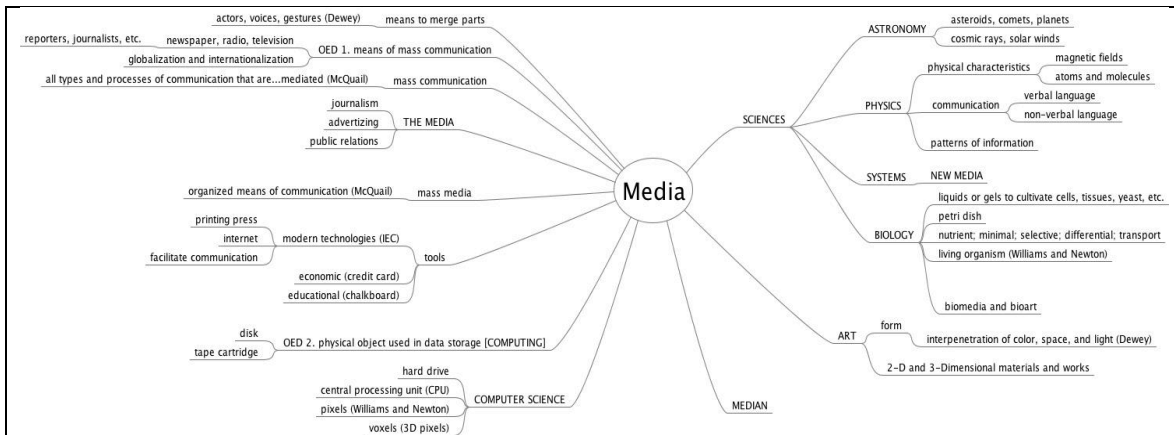
Figure 3. An illustration of a radial category analysis of the term *media*.

Interdisciplinary Corroboration

The metaphoric and metonymic examples overlap with all of the potential interpretations of medium and media in every discipline that may employ the use of medium and media in place of the object of the inquiry itself. One such cross-disciplinary reference is architecture, which is defined by both the aesthetic computation and design criteria that define the space itself but additionally provides space for communication and interaction of participants in the space. This issue will be expanded later in this chapter when discussing the conceptual framing of intermedia. Meanwhile, Dewey provides important considerations for such interdisciplinary relationships:

There are then common properties of the matter of arts because there are general conditions without which an experience is not possible. … The basic condition is **felt relationship** between doing and undergoing as the organism and environment interact. **Position** expresses the poised readiness of the live creature to meet the impact of surrounding forces, to meet so as to endure and to persist, to extend or

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expand through undergoing the very forces that, apart from its response, are indifferent and hostile. Through going out into the environment, position unfolds into **volume**; through the pressure of environment, mass is retracted into energy of position, and space remains, when matter is contracted, as an opportunity for further action. Distinction of elements and consistency of members in a whole are the functions that define **intelligence**; the intelligibility of a work of art depends upon the presence to the meaning that renders individuality of parts and their relationship in the whole directly present to the eye and ear trained in perception.[117]

Thus, architecture can be seen as an interactive aesthetic and social dimension of a given environment (medium/media). Architecture enacts a comprehendible relationship especially in experiencing spatiality and temporality. In an interdisciplinary sense, there are different disciplinary areas of interest and/or modes of inquiry, with thoughts and ideas that a person may attach to media's ecology of meaning.

Another illustration of an application or inquiry-based media is media literacy, wherein the accessing, analyzing, creating, and evaluating of a medium/media can detect and/or bequeath a critical point of perspective that may possibly give birth to additional medium/media, which then can be brought into inquiry. In essence, objects or object catalysts find validation in the terms medium and media, with their use as descriptor, reference of containment of the descriptor, and/or itself a form of containment.

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[117] Dewey, *Art as Experience*, 217.

Other examples would include globalization and internationalization of media as the "means of mass communication" (one of the OED definitions.)[118] These areas set the stage for programming not only on computers but on televisions, radios, videophones, tablets, and cinematic immersive experiences, each connected to internetworked ecologies. In these terms, the means and ends by which media are utilized include continual conceptual reframing, production/reproduction, broadcasting, and consumer consumption. More discussion of newer forms of media and interdisciplinary connections will be presented in Chapter IV.

Intermedia

> Man died when it was discovered that nonlinear experience could be communicated—indeed, had always been communicated. The direct experience of the invisible transaction was itself the communication, telling the brain to change, measured as information. Man's technologies were in themselves communication, and should have been observed as communication rather than as a means for communication. But on this level man was lost. The map is not, and never will be, the territory.
>
> —John Brockman[119]

We move now to the concept of intermedia, spatially and temporally based communication and art at the interplay of media. Samuel Taylor Coleridge was the first

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[118] "media," Oxford Dictionaries. Oxford University Press, accessed August 28, 2016. http://www.oxforddictionaries.com/us/definition/american_english/media.

[119] John Brockman, *By The Late John Brockman* (New York: Macmillan, 1969), 159.

to use the term intermedium in 1812.[120] More recently, the OED definitions of intermedium are

1. Something intermediate in position; an intervening space, interval of space

2. a. Something intermediate in time; an intervening action or performance; one between the parts or acts of a play, an interlude

b. An intervening time, interval of time

3. a. An intermediate agent, intermediary, medium; esp. in earlier *Chem*. and *Physics*, a substance serving as a means of some natural action or process

b. With mixture of sense. An intervening medium serving to transmit **energy** through space [emphasis added]

From the study of communication, Klaus Bruhn Jensen identifies intermediality in reference to the "interconnectedness" of media. He further identifies three conceptions of intermedia in communication research: 1) "the combination and adaptation of separate *material vehicles* of representation and reproduction," 2) "communication through several *sensory modalities* at once," and 3) "the interrelations between media as *institutions* in society."[121]

In an artistic context, intermedia was founded in 1961 as the Fluxus movement and emerged as a melding of media in interdisciplinary situations or experiences, also known as happenings, which evolved into what is now known as participatory art or interactivity. Some noteworthy artists have included Marcel Duchamp, George Maciunas,

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[120] Samuel Taylor Coleridge, William G. T. Shedd, and Henry Nelson Coleridge, *The Complete Works of Samuel Taylor Coleridge. With an Introductory Essay upon His Philosophical and Theological Opinions* (New York: Harper, 1858), 247. (Also see Lisa Moren, ed., *Intermedia: The Dick Higgins Collection at UMBC* (Albin O. Kuhn Library & Gallery, University of Maryland, Baltimore County, 2003.) Contributions by Hannah Higgins, Owen Smith, Kathy O'Dell, Ken Friedman, Ina Blom, Marina Grznic, and others.)

[121] Klaus Bruhn Jensen, "Intermediality."

John Cage, Dick Higgins, Allan Kaprow, Shigeko Kubota, Nam June Paik, and Charlotte Moorman. Higgins elaborates on Duchamp's notion of intermedia as a "ready-made or found object … a location in the field between the general area of art media and those of life media."[122]

An intermedia installation is typically understood as pre–computer driven, extremely experimental in nature, and experientially enacted. It can be seen as an installation of a media art event (or some cases as multimedia, which will be covered in more detail in Chapter IV) and/or an opportunity for the emergence of more complex systems of interaction. To clarify this point, intermedia can include the amalgamation of or contrast of concrete (visual) poetry, cinema, performance, conceptual art, mail art, graphic music notations, science/art, dance/theater, and sound.[123]

Dick Higgins coined the term *intermedia* and describes its corroborative elements from Fluxus in the engagement of the participants or audience members. His daughter, Hannah Higgins, notes, "the audience has to do something to complete the work. Blink hard. Stare hard. Pick up the glasses. Fluxus artists have consistently described their work, particularly the objects they produce, as performative."[124] Dick Higgins observes:

> Much of the best work being produced today seems to fall between media. This is
>
> not accident. The concept of the separation between media arose in the

[122] Dick Higgins, with an Appendix by Hannah Higgins, "Synesthesia and Intersenses: Intermedia," 1965. http://www.ubu.com/papers/higgins_intermedia.html. Originally published in *Something Else Newsletter* 1, No. 1 (Something Else Press, 1966). Also published as a chapter in Dick Higgins, *Horizons, the Poetics and Theory of the Intermedia* (Carbondale, IL: Southern Illinois University Press, 1984).

[123] Ibid. See Dick Higgins' Intermedia Chart.

[124] Higgins, *Fluxus Experience*, 25.

Renaissance. … However, the social problems that characterize our time, as opposed to the political ones, no longer allow a compartmentalized approach.[125]

In the multiplication of media and their categorization, Higgins offers some excellent examples: "opera, which discretely combines theater with music and dance) or mixed media (as in illustrated stories, presenting complementary images and words)." He rounds out these forms by elaborating that intermedia is an activity that "probes the spaces between different media."[126] In 1966, Eleanor Lester noted the analogous contexts between Dick Higgins and literary agent/artist John Brockman's instantiation of Intermedia Kinetic Environments (IKE). Additionally, she emphasized that "Brockman believed that they could be 'therapeutic' and noted that IKE artists were able to 'see through the years of conditioned responses.' "[127] Hannah Higgins illuminates the role of intermedia in relationship to the material qualities of experience, much in the same way that Dewey does. She states,

> Significantly, even though secondary systems of knowledge (art, music, poetry, theater) contribute to the intermedia function, it is the *life media* (spontaneous decision, the relationship to the environment, and the physical parameters within which the work occurs) that keep it always within the primary information, or experiential, modality.[128] [emphasis added]

In my estimation, this notion of intermedia can be further extended to John Dewey's notion of deliberation and dramatic rehearsal in *Human Nature and Conduct*,

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[125] Dick Higgins, quoted in Higgins, *Fluxus Experience*, 95.

[126] This is possibly an allusion to McLuhan or vice versa. See Marshall McLuhan, David Carson, Eric McLuhan, William Kuhns, and Mo Cohen, *The Book of Probes* (Corte Madera, CA: Gingko Press, 2003).

[127] Eleanor Lester, "So What Happens After Happenings?" *The New York Times*, September 4, 1966, 9, 17.

[128] Higgins, *Fluxus Experience,* 95.

whereas these interactions and these dialogs between, for example, an artist and architecture, an artist and images, and an artist and environment create a new emergent level of interaction. In some ways, these artistic deliberations, these cartographies of meaning, can be understood as forms of scenario planning for the future. More discussion of these terms will appear in Chapter III.

Additionally, McLuhan conceptualizes art, most importantly, as a Dew-Line, Newsletter as Distant "Early Warning System for our era of instant change."[129] How can art/communication and media offer a possible structure for dealing with the ever changing environments and worlds we inhabit? One answer is pattern recognition. Intermedia and Fluxus artists understood this, and in our contemporary world it is the fusion of art and science that offers us visualizations and openings for how to deal with oncoming problems (think of an online map, which will be discussed in Chapter IV). As McLuhan observed:

> Pattern recognition in the midst of a huge over-whelming destructive force is the way out of the maelstrom. The huge vortices of energy created by our media present us with similar possibilities of evasion of consequences of destruction. By studying the patterns of the effects of this huge vortex of energy in which we are involved, it may be possible to program a strategy of evasion and survival.[130]

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[129] Marshall McLuhan, Announcement for the "Marshall McLuhan Dew-Line Newsletter," *Dew Line Newsletter* (Scotland, UK: Learning Resources, Glasgow School of Art Library, 1969).

[130] Marshall McLuhan, Stephanie McLuhan, and David Staines, *Understanding Me: Lectures and Interviews* (Cambridge, MA: MIT Press, 2003). Also see "York University Lecture, 1979," in Marshall McLuhan, Tom Wolfe, Stephanie McLuhan, and McLuhan Productions, *The Video McLuhan* (Toronto: McLuhan Productions, 1996).

This may prompt us to wonder if intermedia artists are analytical researchers bridging the gaps between science, art, and the live world. This is ripening fruit for further study.

In summary, intermedia is a form of metareality. Hannah Higgins explains that through metareality, we are

> "redirecting the ordinary" towards significance. The fact that "something and indeed a very great deal is always lost when we try to think about art in terms of preexistent systems" only underscores the notion that Fluxkits and Events, in their intensive studies of things or actions, are not structured according to any one model of describing experience. Rather, the Event or Fluxkit is a metarealistic trigger: it makes the viewer's or user's experience special.[131]

Intermedia acts as a musical instrument in the hands of artists and communicators. It reveals certain time-based processes and modes of being in the world by assisting us in probing our environments through participatory and cooperative engagements. It is these interdisciplinary and dialogical interventions that can unpack lived experience and thrust it manifestly into the consciousness of its audience. Intermedia contort our perspective of temporality and the world, placing them in distinct orientations whereby new structures, movements, functions, and opportunities can rise to the level of significance.

Figure 4 represents the radial category analysis that has been presented in this section. It might be argued that with the emergence of more complex systems of interactions, these intermedia are inevitable. As Jensen concludes, "The 1960s witnessed the coming of a general media concept as well as early considerations about intermedia relations. Digitization represents an opportunity for research to revisit past, present, and

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[131] Higgins, *Fluxus Experience*, 62.

future definitions of media."[132] These digital substantiations will be covered in greater detail in Chapter IV.
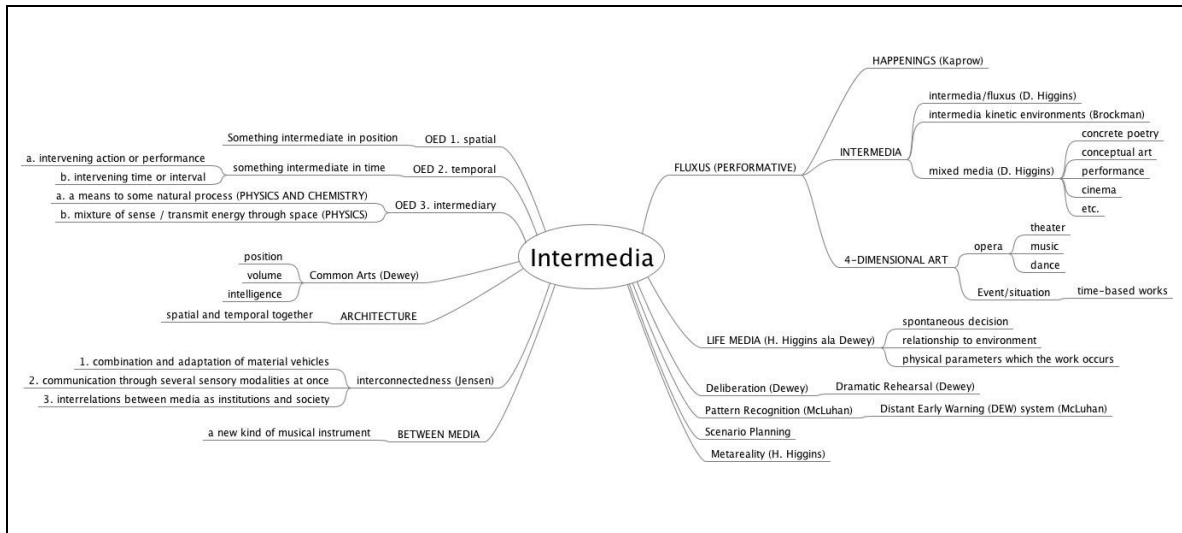
Figure 4. An illustration of a radial category analysis of the term *intermedia*.

Chapter Summary

This chapter has explored multidisciplinary definitions of medium, media, and intermedia. Using radial category analysis, we have established these definitions as multilayered, complex, contradictory, and in many ways, coemergent. There are no final media. There are no separate objects. There are no distinct environments.

Our relational account of media, this integrated account of media, is crucial to our understanding of emergent forms of media and to building a curatorial (and hopefully curational) approach to contemporary communicatory theory-practice as an embodied

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[132] Jensen, "Intermediality."

praxis. "In suggesting a world with no restrictions, Fluxus suggest[ed] a world in which it is possible to create the greatest value for the greatest number of people."[133]

As we progress through this dissertation and in Chapter IV especially, we will begin to inform ourselves—together—with more discussion of emerging analogue, digital, and hybrid systems and meanings of media in relationship to how we can repair the dichotomous imprinting we have been exposed to. Whether ourselves and the environment, whether subjects and objects, whether culture and nature, whether political economy and ecology—we exist in multiplicity and in multiplicity we cocreate.

Before turning to emergent media, new media, multimedia, transmedia, and metamedia in Chapter IV, Chapter III offers historical exemplars of repair cultures, an ethics of care, and a curational approach to human experience through a settlement (Hull-House), exposition (World's Fair), and foundation (Barnes Foundation).

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[133] Annmarie Chandler and Norie Neumark, *At a Distance: Precursors to Art and Activism on the Internet* (Cambridge, MA: MIT Press, 2005), 415.

CHAPTER III

CHANGING MATERIAL PRACTICES

This chapter will explore changing material processes in relationship to curated environments. We need intelligent inquiry and new modes of engagement. The chapter includes examples of how these processes are playing out concretely in people's lives—as a foundation for curated environments.

This chapter will respond to RQ2: How have material enactions of a curational approach been utilized by various civic (affairs and engagement) innovation institutions in the past? This question will be answered by the following exemplars presented chronologically: the first is the work of Jane Addams and Ellen Gates Starr at Hull-House, the second is the 1893 World's Columbian Exposition (World's Fair), and the third is the collaboration between John Dewey and Albert Barnes at the Barnes Foundation. As this dissertation develops, we will see how these exemplars can be understood as developing art as an outstanding process of communicative practice. These exemplars eventuate in a curational process, especially in relationship to meaning-making.

Exemplar 1: Jane Addams, Hull-House Museum, Chicago, IL (1889)
Overview and Conditions of Life

As an exemplar of a curational approach, I begin with a focus on Jane Addams's on-the-ground social engaged settlement house and its contemporary "dynamic memorial" Hull-House Museum, where the University of Illinois, Chicago now stands, as a "site for the interpretation and continuation of the historic settlement house vision,

linking research, education, and social engagement."[134] Throughout this section, I

incorporate an interview conducted with pragmatist feminist philosopher Charlene

Haddock Siegfried, Professor Emeritus at Purdue University, and Lisa Junkin Lopez, (at

the time) Interim Director and Associate Curator of the Hull-House Museum.[135]

Jane Addams was a pioneer, a path builder, and a Nobel Peace Prize winner, who

along with Ellen Gates Starr developed conditions for the social settlement house

movement to come to life. Her work as a theorist, writer, activist, and public

spokesperson and her charismatic personality garnered both fame and ridicule.[136] But

from her investment in her community, a tapestry was woven. Addams founded Hull-

House in 1889, with her own family's fortune and the kind gestures of Helen Culver,

philanthropist and owner of Hull-House. Culver rented the location and would eventually

bestow the title and major portions of her estate to Addams, including Hull-House itself

(Figures 5 and 6). Interestingly in 1895, Culver also contributed

> to the construction of four [natural science] research laboratories for zoological,
>
> botanical, anatomical, and physiological investigation. … Hull Biological

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[134] "About The Museum — Jane Addams Hull-House Museum." http://www.hullhousemuseum.org/about-the-museum.

[135] The interview was conducted November 22, 2014, at a coffeehouse after the panel I organized on "Communication and Pragmatism: 100 Years Later" at the 2014 National Communication Association (NCA) Conference Centenary, which happened to be in Chicago, Illinois.

[136] Transcript selection from interview after NCA 2014:
Haddock Seigfried: And you meet only a few people like that [in life]. But people want to work with [people like her]…. They'll do anything. And being the public spokesperson.... So she got to write up…what they were doing [at Hull-House].... [It] gave her a chance to write, which means philosophers have something to say. You know, when I was recovering women (in Pragmatism), my problem always was: well, of course, there's these women who did wonderful things, but did they write anything?
Lisa Junkin Lopez: They didn't write.
Haddock Seigfried: Because if they don't write anything, what can I do with them? And here was this wonderful Jane, who was writing all the time. I don't know when she had the time to do it, but…
Lisa Junkin Lopez: It's amazing.
Haddock Seigfried: As she was also constantly doing things, but that's why you get this wonderfully rich…philosophical reflections on what she's doing. And she talks about her method all the time, without using…formal words. But she does it.

Laboratories … expressed her desire to support "those forms of inquiry which explore … the laws of life" and to be the "means of **making lives more sound and wholesome**."[137] [emphasis added]

Addams's life partner, Ellen Gates Starr, was a longstanding practioner in the Arts and Craft Movement. Together Starr and Addams established the Labor Museum, a constructive, skills-building environment for immigrants to engage in traditional handcraftsmanship and cross-cultural experiences. Additionally, "The first settlement house art exhibits sought to improve the lives of the poor by introducing ideals of beauty and models of good design."[138] It might be noted here that there are many analyses of Hull-House's history.[139]

The circumstances in late 19th and early 20th century Chicago did not support an environment in which social mobility or social welfare were in any sense commonplace. The dirt roads were lined with human and food waste, with carriages running by, compressing, and compacting this vile residue of city life into what today would be called pavement. The emerging sickness and disease that accompanied this cacophony was felt by its inhabitants but most especially and sadly by young children.[140]

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[137] Joe Scott, "Building for a Long Future: The University of Chicago and Its Donors, 1889-1930: Helen Culver," Web Exhibits - Special Collections Research Center, The University of Chicago Library.

[138] Mary Ann Stankiewicz, "Art at Hull House, 1889-1901: Jane Addams and Ellen Gates Starr," *Woman's Art Journal* 10, no. 1 (1989): 36.

[139] Historical accounts of Jane Addams and Hull-House include Jane Addams, *Twenty Years at Hull-House, with Autobiographical Notes.* (New York: Macmillan, 1910); Barbara Garland Polikoff, *With One Bold Act: The Story of Jane Addams* (New York: Boswell Books, 1999); Marcet Haldeman-Julius, *Jane Addams As I Knew Her* (Grand Rapids: Kessinger, LLC, 1934/1999); Maurice Hamington, *The Social Philosophy of Jane Addams.* (Champaign, IL: University of Illinois Press, 2009); Maurice Hamington, "Jane Addams," in *The Stanford Encyclopedia of Philosophy,* ed. Edward N. Zalta (Fall 2014 Edition); and Wikipedia contributors, "Hull House," Wikipedia, The Free Encyclopedia, accessed August 6, 2016. https://en.wikipedia.org/w/index.php?title=Hull_House&oldid=676852633.

[140] See *World's Columbian Exposition, Chicago, Ill., 1893. Report of the Committee on Awards of the*

Addams's attention to hygiene and cleanliness was transformative. She assisted

children of all backgrounds, in particular the disenfranchised and impoverished

immigrant children, who were able to enter the Hull-House and find sanctuary in the

midst of danger and putrescence.

One of the place cards on the wall at the contemporary Hull-House Museum

explains that

> Settlement houses provided spaces and opportunities for college educated people
>
> to research, work, and improve urban conditions. These men and women *settled*
>
> in poor urban areas in order to share, receive and create knowledge and culture
>
> with their neighbors as interdependent communities.

In her introduction to *Feminist Interpretations of John Dewey,* Seigfried cites

scholar Marilyn Fischer's description of Hull-House and the settlement movement:

> a widespread experiment to reconstruct the nature of the family; on the one hand,
>
> by demonstrating where poor sanitation, crime, and adverse working conditions
>
> can claim the lives of even the most sheltered children; and on the other hand, by
>
> the nature of the intimate and wider social relations of the female residents of the
>
> Hull House "family."[141]

World's Columbian Commission. Special Reports Upon Special Subjects or Groups. Vol. II. (Washington: Government Printing Office, 1901), 925-931.

[141] Charlene Haddock Seigfried, *Feminist Interpretations of John Dewey* (University Park, PA: Pennsylvania State University Press, 2002), 19.

Figure 5. Scale model under glass of the original multiplex of buildings on the Jane Addams Hull-House site (featured at the Jane Addams Hull-House Museum).[142]

The Labor Museum

In *Jane Addams: A Centennial Reader*, Aline B. Saarinen explains that the arts were understood not merely as exotic or extended modes of inquiry, but were integral to Hull-House: "classes in the plastic and graphic arts, in drama, music and dance, and crafts at Hull-House served their psychological 'occupational therapy' role … in affording emotional release and the freeing of creative impulse, but they also served to

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[142] Note the Pond & Pond architecture, as well as the tuberculosis tent on top of the Crane Nursery, the building in the bottom-left quadrant.

Figure 6. The interior of the Hull-House main hall still standing on the original site.

develop skills and techniques."[143] This is the type of reparative role that I feel my notion

of curation embodies and will be discussed further in Chapter VI.

These educational and artistic relationships were echoed in the development of

the museological environment at Hull-House. Children of immigrants often were in need

of a set of circumstances to understand the value of labor and the historicity and

continuity of their communities of practice. According to Dewey, Hull-House was

> the new labor museum ... [whereby] the skill and historic meaning in the
>
> industrial habits of older generations—modes of spinning, weaving, metal-

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[143] Aline B. Saarinen, "The Arts," in Jane Addams, *Jane Addams: A Centennial Reader* (New York: Macmillan, 1960), 172.

working, etc., discarded in this country because there was no place for [children to learn about the history of labor] in our industrial system. Many a child has awakened to an appreciation of admirable qualities hitherto unknown in his father or mother for whom he had begun to entertain a contempt. Many an association of local history and past national glory has been reawakened to quicken and enrich the life of the family.[144]

Part of this historical analysis is based on a series of works at the Museum that includes an interpretive installation of text-covered boxes on the mantel over the fireplace. The most noteworthy of these boxes were related to Maria Montessori and John Dewey. The box about Montessori explained that her school "was established at Hull-House in 1917 by Caroline Foulke Urie and Olive Hunter Bliss … [and] introduced child-sized furniture and lively colors to classrooms. Her teaching method encourages learning through independent exploration and self-direction."

The interpretive box pertaining to Dewey related to his work at the University of Chicago and his development of the Laboratory School. "Education through experience … students learned practical skills … science was mastered in the garden as well as the classroom." This mode of inquiry was reiterated in the work of the Barnes Foundation, in which Dewey was also instrumental (and which will be discussed in the next section of this chapter).

Addams's connection to Dewey was significant. They collaborated professionally and politically to foster democratic community and innovative educational approaches, especially related to civic engagement. Dewey served as a founding trustee to Hull-

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[144] John Dewey, "The School as Social Center," *The Elementary School Teacher 3*(2) (1902): 85-86.

House[145] and his work in developing experiential learning as a mode of social education was instrumental in Addams's endeavors. In his essay "The School as Social Center," he refers to Hull-House as a "social clearinghouse ... where ideas are incarnated in human form and clothed with the winning grace of personal life."[146]

Maurice Hamington echoes these sentiments as he explains how Jane Addams and Hull-House fostered "sympathetic knowledge" as care (or what I am calling curation) as a disruption:

> The idea that humans can learn about one another in terms that move beyond propositional knowledge, that is rather than merely learning facts, knowledge is gained through openness to disruptive knowledge. Knowledge can be disruptive in the sense that new information can transform one's perceived experience and understanding. This idea motivated Addams and the residents of Hull-House to undertake the first urban study of racial demographics.[147]

Addams's and Starr's vision and practice of "providing a physical location where people of different backgrounds could meet, [where] social knowledge is built up reducing the abstraction of distant others transforming them into concrete, known others"[148] is vitally important, especially in today's world.

These activities have tangible implications that present ways to develop the "how" of an embodied aesthetics of human interaction in a social environment—one that

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[145] John Dewey, "Unpublished Writings: Child Health and Protection," in Vol. 17 of *The Later Works* (Carbondale, IL: Southern Illinois University Press and Intelex Electronic Edition, 1885–1953/2008), 573.

[146] John Dewey, "The School as Social Center," in Allen Freeman Davis and Mary Lynn McCree Bryan, *Eighty Years at Hull-House* (Chicago: Quadrangle Books, 1969), 98-99.

[147] Maurice Hamington, "Jane Addams (1860—1935)," *The Internet Encyclopedia of Philosophy*, http://www.iep.utm.edu/addamsj.

[148] Ibid.

encourages us to foster change and transformation of habits. (This concept is explored in greater detail in Chapter V.)

As noted in one of Addams's biographies:

Addams suggests that the many social activities sponsored by Hull-House—clubs, dances, performances, athletics—were not frivolous affairs but a means for breaking down barriers between people, thus fostering sympathetic knowledge.[149]

When recognizing this form of moral and embodied knowledge, it is important to consider the challenges and drawbacks and that Addams's compassion, especially while acting as a charity worker, did have its shortcomings, as Seigfried noted in the interview. She explained that early on, Addams was sometimes met with disdain:

it's in *Twenty Years at Hull House* … when the social worker runs into the working person's culture … is totally alien to her, because she's coming from … a wealthy, middle class family, and she can't understand why they're … ungrateful, because she brings them something. This is the beginning of social work … the charity worker. She brings them something, and they go, "Fine." And she brings it … she's going to make regular visitation and … she says, "Look, you know, they're not very grateful." And they look at her and say, "Well, you have really nice shoes. You don't give me the shoes. You came here in a car. You don't give me a car." … She thinks she's being so bountiful but she sort of dribbles out what's appropriate for them. That's why they like the work bosses better, cause they throw turkeys at them.

Lopez and Seigfried further captured the essence of the Labor Museum as a part of the progressivism at the turn of the 20th century. Lopez explained that what was

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[149] Ibid.

happening at the Labor Museum was in opposition to what was happening at larger institutions, as it engaged a theatrical and performative quality.

> Although, even in the larger institutions there was that thread of working man's day at the museum. … [At Hull-House] on Saturdays they would throw open the doors of the museum and people from the community … would perform traditional handicrafts in costume … in their ethnic clothing. And people not only from the neighborhood, but also from Lakeshore Drive would come down. … Addams was demonstrating her poly-culturalism. … [S]he was literally putting … [immigrants] on a pedestal … in a space where people didn't understand the value.

Seigfried added:

> And the important part was that what were the women doing at the neighborhood sweatshops were all over. And the children, the first generation, which is always a generation you lose, in immigration, looked down on their mother's handicrafts as old world, old fashion, spinning wheel. "Oh my gosh, that's archaic." And she wanted to say, "Look, that spinning you see here is the same spinning they're doing at the spinning wheels in the industrial revolution." … Suddenly they could be proud of their parents. And so then … it wasn't a museum just to show—it was directed towards changing people's minds.

Addams's intention to influence people's thinking was also evident in 1893 during the World's Fair: Columbian Exposition in Chicago, which celebrated the 400th anniversary of Christopher Columbus's landing and American progress, especially intellectually. Addams was the chair of the Woman's Committee for the "Congress on

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Social Settlements" (chaired by Charles Zeublin),[150] bringing this sense of progressivism

to a curated public.[151] Addams's strength was her ability to be able to develop a

nondualistic role for the settlement house movement in bringing together what were

typically marked as the differentiated features of capital and labor.

> Addams assumed her characteristic role of mediator and peace-maker, casting the
>
> central question as not one of capital against labor, but of readjusting the relation
>
> between the two. After quoting Mazzini's famous saying that, "The ensign of
>
> democracy was being torn to shreds, and each rag was being flourished with its
>
> particular motto," she concluded that "it is the duty of the settlement movement to
>
> put together these various shreds and make a new flag."[152]

The major additions to the Hull-House complex were completed in 1912, but by

1933 there was another turning point in its history. Seigfried referred to one important

person, in particular, who was inspired by the Hull-House's Labor Museum: Julius

Rosenwald, the founder of the Museum of Science and Industry (MSI) in Chicago. As

Seigfried then noted, "Think of the title: Science and Industry." Again, Addams was

ahead of her time.

The deep connections between Addams's and Starr's socially responsible

settlement and the practices of science and industry are inescapable. For instance, in 1893

at the World's Fair Columbian Exposition, the Palace of Fine Arts was erected. It was

years later that Rosenwald founded the MSI at the 1933 World's Fair Century of Progress

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[150] Diane Dillon, "The World's Columbian Exposition and the Spread of the Settlement Movement." Hull-House Website archive, University of Illinois, Chicago, n.d.

[151] Karen Manners Smith, *New Paths to Power: American Women, 1890-1920* (New York: Oxford University Press, 1994), 356.

[152] Another quote from Dillion. Additionally, she cites "Seeking the Truth: Meetings in Other Halls," *Chicago Herald*, July 21, 1893.

International Exposition.[153] Without the progressive influence of Jane Addams, it is possible to say that the MSI in Chicago might never have been created. In fact, the Illinois Women Artists Project claimed that Hull-House was the prototype for the "'*hands on*' museum template," as well as the inspiration for the Children's Museum in Chicago.[154]

Seigfried explained that Addams "did on a small scale [with the Labor Museum]… . He [Rosenwald] got that from Addams. So she did influence curation." This emphasizes that curation is about care at its core. If we think of curation in terms of social curation, it is care for human beings, or better yet, for society. Seigfried agreed and concluded that, "when we lose that, we lose culture."

In the same vein, Lenox Riley Lohr (1891–1968), who was the general manager for the Chicago World's Fair in 1933–1934 and a strong advocate for Hull-House, came back to Chicago in 1940 to head the museum. The connections between Lohr and Hull-House are evident, as reported in Lohr's papers: "A charter member of the University of Illinois Citizen Committee, he also directed the University's fundraising efforts to restore … Hull-House."[155]

Jane Addams offers a philosophically rich and practice-oriented approach, not merely for repairing disparate pairs of object-subject, culture-nature, etc., but also what in

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[153] "About Us." Museum of Science and Industry, Chicago. Illinois, http://www.msichicago.org/explore/about-us/

[154] The points made in this section are echoed in Kimberly Ewald, "Women Artists of the Hull House Between 1889 and 1940: The Settlement and its Support for the Arts" (Peoria, IL: The Illinois Women Artists Project: Bradley University, May 2009). http://iwa.bradley.edu/essays/HullHouse: "The '*hands on*' museum template established first at the Hull-house became the model for Chicago's Museum of Science and Industry and the now popular Children's Museum."

[155] Lenox Riley Lohr papers, Richard J. Daley Library Special Collections and University Archives, University of Illinois at Chicago, http://findingaids.library.uic.edu/ead/rjd1/LLohrf.html.

Judaism is termed *tikkun olam*—repairing the world. She used a museological reparative approach to care for children's lives and the traditional handicrafts (techné of the practical arts) along with the high arts to construct a cross-generational, cross-cultural environment.

Perplexity as Inquiry

The spinning wheel as a media/medium and metaphor offers a nice illustration of a radial category visualization, bringing together different disciplinary approaches, different walks of life, and different strata of society. It may be a starting point to recognize that a medium itself is what is the disparate conceptual frame among all of the different people that Hull-House touched. The way that Dewey saw light, color, and line as a medium (as noted in Chapter II) is a necessary precursor to the media of a spinning wheel enacted as an expressive gesture of action. For over a century, American pragmatism has been trying to rebuild an embodied context for media. It is not simply about the environmental characteristics of pigments that go into making paints, but we actually must see ourselves, as human beings, as media.

In my interview, Seigfried offered another conceptual framing for Dewey's pragmatic method: the notion of perplexity "that puts us in the real world, away from abstraction." She explained (in her introduction to Addams's *Democracy and Social Ethics*[156]) that perplexity is her methodology, that Dewey used it at the beginning of his work, and that it predates his notion of inquiry. Seigfried writes:

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[156] Jane Addams and Charlene Haddock Seigfried, *Democracy and Social Ethics* (Urbana, IL: University of Illinois Press, 2002).

in the pragmatic method where he says, "You have to instantiate the pragmatic

situation. It's not obviously problematic." You have to instantiate it [the situation]

and then you will have to … identify it, then you have to look back if anyone else

has said … that whole thing about it, and then you act on it. Then you come back

and redo it. So she [Addams] instantiates a problematic situation when she said,

Here's this work, here's this woman, here's her clients, and she's perplexed …

Dewey … says, there's a perplexity. … Later, you don't hear that. It becomes

much more technological.

Seigfried provides the following explanation, which is worth quoting in its entirety as it

helps to explain Jane Addams, Hull-House, and the concept of perplexity:

The person is perplexed because she doesn't know what to do, and it's a

perplexing situation. Remember how he talks about which it is: is it the person or

is it the other? It's both. Because that's what makes it perplexing. But here's the

genius: At that moment, she said, "Okay, once it's been instantiated, the question

becomes what do you do about it." She said, "Either the woman will turn back

and say, 'I can't deal with this. It will shake me up.' And she refuses to go

forward and she goes back to her community. Or, she said, 'She'll take the

perplexity, the perplexity is why aren't you grateful when I'm trying to help you

and why don't you accept my morality, my description of this? … You seem to

have a different morality, but to me it's debased.' And she said, 'If she has the

courage, so look at all the personal courage you have to … say why is this

happening, you have to say this hurts me, you have to say I don't understand what

you're doing. I'm perplexed. If she goes forward, she will—and this is why she

doesn't want to—she knows that her most cherished beliefs will be challenged. She won't come out at the other end the same person. But neither can you assume that the person that she's dealing with will either. Because if she shares it with them, they're going to have to look at their response in a different way also. If she has the courage to go through, she will learn and be a better charity worker and she will understand better. And in that interaction, both of them will be changed, and the terms of the action will be changed." That's a pragmatic method. But look how she brings together the personal, and the situational, which Dewey talks about but never … together. I think it's brilliant.

In Dewey, perplexity is understood as inquiry, how to deal with an indeterminate situation, where a person is blocked and things do not make sense, where a person is perplexed. In this way, one's habits are unable to overcome and provide a readymade answer to a situation. With enough dedication to deliberation and imaginative engagement (noted below in the section on the Barnes Foundation), it may be possible to develop a solution that allows for opportunities that perplexity affords. This is akin to transformational learning methodologies that take into account relational and experiential learning theory-practices. Philosopher Mark Johnson encourages us to see through the eyes of pragmatism and embodied aesthetics in much the same way, in order to remake experience and transform our interactions with the environment. I will expand on this point in Chapter V.

The Contemporary Museum

According to Lopez, the contemporary Jane Addams Hull-House Museum was established in 1967 and continues the legacy of the original Hull-House in welcoming visitors and research scholars. In 2014, when I conducted a site visit and interview, it was both a relic of and a place for performative engagement with the public, as I noted at the time:

> Standing on the top steps of the entrance to the Jane Addams Hull-House Museum in Chicago, Illinois. The feeling of security and safety is ever-present and abundant. After walking inside from a cold and rainy day … seeing the diverse groups of people who have come here brings a sense of warmth and compassion to me that is palpable. The imagery and installations only reinforce the sense that not only is this place and space special, but the traces of Jane Addams's legacy are generational and, in turn, long-lasting.[157]

In the interview, Lopez and Seigfried explained that this had not always been the case and that keeping to the mission of the institution was difficult, especially in the intervening years when the site was being torn down. Lopez noted that, "the campus tore down the other buildings. They saved these two [the current site] because there were protests that went all the way to the Supreme Court about the demolition of the neighborhood. … The mea culpa from the university was, 'Well, we'll save these buildings.' " Seigfried then added, "But, then they ignored it." Lopez agreed and described Hull-House during those years as

> just a really dusty, sleepy place for a long time. And then a bunch of second wave women's historians … said, "No, no. We really need this place." And they

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[157] Notes from site visit on November 23, 2014, 2:22pm.

did a lot of really important work that is foundational to the museum. But it was

research based because they were academic historians. … So, they are the ones

who put the collection together, they're the ones who did huge amounts of

primary research. … We owe everything to them. … [At that time] it wasn't a

very public institution. … But they knew, because they had the politics, they

knew what Hull-House was really about. And so they created a strategic plan that

was really about getting back to some of those values and getting out into the

community. And then about ten years ago, we hired our last director, Lisa Lee,

who studied Adorno … and really thinks about public sphere theory. And so she

embraced the mission of Hull House, and also Jane Addams and really pushed us

into the place that we are now, where … we take for granted a lot of these

values. I mean, it was very useful for me … to think about pragmatism as the

framework for our operations because … these are givens for the work that we

do … [and] I feel … in the future I'm going to really lean on a … pragmatist

framework in order to help people understand what it is that we do.

It is this coordination of philosophical and practical, practice-based approaches

that brings theory itself to engagement and likewise brings practice to be reinterpreted by

theory. Action interposes the circle of theory-practice and requires a material, situated

presence for these types of civic-minded applications to come to fruition.

The contemporary genealogy of the Museum and the practices that have been

enacted there are noteworthy, especially in the experiential aspects that were evident on

the second floor where one of the room-size installations included a swing hung from the

ceiling. The continuities between the legacy site and the Museum—perhaps not

immediately obvious—offer an evolutionary transposition of sociopolitical transformation that has occurred over the last century.

It is clear that Jane Addams and John Dewey influenced each others' theory and practice by crossing boundaries of pragmatist philosophy and action. Each in their ways assisted both individuals and communities to find fitness as an improved quality of life, with the outgrowth as a flourishing sociocultural competency. Through correspondences,[158] Hein points to Dewey's collaboration with Addams and the influence she had on his "appreciation of the value of museums for social learning …[and] … their ability to expose students to … active inquiry."[159] Interestingly, each presented at Congresses at the Exposition (World's Fair) in 1893, which offers us a direct way to connect them and the ramifications of socially engaged transformations that were emerging at the end of the 19th century and on into the 20th century.

Exemplar 2: World's Fairs/Expositions

Introduction

This section presents World's Fairs and Expositions (eventually known as Expos) as another exemplar that illustrates a civic orientation to legacy and emergent media of the time. More specifically, the focus is on the U.S. 1893 World's Columbian Exposition (which involved Addams and Dewey, as noted above) with brief remarks about its connections to the 1933–1934 World's Fair: A Century of Progress International Exposition in Chicago (which Dewey discussed).

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[158] John Dewey, "Letter, John Dewey to Jane Addams, January 27, 1892" (00475), *The Correspondence of John Dewey, Volume 1, 1871-1918*. Electronic Edition, Charlottesville, VA: InteLex.

[159] George E. Hein, *Progressive Museum Practice: John Dewey and Democracy* (Walnut Creek, CA: Left Coast Press, 2012), 48-49.

Jane Addams and Albert Barnes (as we shall see in the next section), in their own ways, educated their publics with the creation of social learning settings to curate either the fragmentation of generations from one another and immigrant populations from resident citizens and the interplay of the craft arts and high art as nondichotomous. This can be seen as a precursor of participatory art engagements, a legacy thread for intermedia as a framework that offers space for the collaboration of the arts, sciences, and publics to blur the boundaries between disciplines and modes of embodied and conceptual inquiry.

This exemplar extends these approaches to industry and government and their relationships to the communities of practice in major world cities. From exhibitions of excellence in both industry and culture to the synthesis and multiplication of avenues for large-scale knowledge sharing, these environments constructed places and spaces for civic engagement. World's Fairs have morphed over the decades taking in consideration on a global scale the integration of diverse and fragmented publics. A World's Fair becomes an interesting exemplar of "information sharing" (pre-Internet and before extensive global and international communications), whereby both the participating nations and the attendees give and receive inspiration and offer tangible products and services of the "future" that will make society more efficient and effective but more importantly offer potential solutions to social problems that we face.

From the birth of a social ecology at the turn of the last century, in other words the study of the interrelations of human beings interacting with their environment,[160] the World's Fairs/Expos similarly instantiated an ecology of communication, transportation,

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[160] Robert Ezra Park and Ralph H. Turner, *On Social Control and Collective Behavior. Selected Papers* (Chicago: University of Chicago Press, 1967), 81.

industry, the arts, and sciences in various collaborative endeavors. These are evidenced in the decision making based on the 1890 census[161] along with the cultural, social, political, and economic synthesis of the Fair/Expo as a microcosm of a model society. The Fair/Expo employed deliberation and dramatic rehearsal for our future civilization. (These concepts are elucidated in the following section on the Barnes Foundation.) Local communities were highlighted, indigenous and folk cultures were presented, and captains of industry formed major infrastructure projects (eventually including themes such as sustainability). These were part and parcel, literally, of the enactment of Fair/Expo sites, which developed locations to prototype and show examples of the ways that society and culture could evolve in the future.

Overview of World's Fairs

World's Fairs or Expos are major and minor international public gatherings featuring an exhibition of the arts, science, technology (products and services), trade, issues of the day, entertainment, and other related areas of interest. These events are meant to foster visions of the past, present, and future—yesterday, today, and tomorrow.

The decision-making organization for World's Fairs[162] was founded on November 22, 1928 in Paris, France and named the Bureau of International Expositions (BIE).[163] In

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[161] "1893 World's Columbian Exposition Collection," The Field Museum, Chicago, Illinois. https://www.fieldmuseum.org/1893-worlds-columbian-exposition-collection.

[162] This entire section on the World's Fairs is a mixture and paraphrasing of multiple websites including: the BIE website noted in the following entries http://www.expo-museum.org/en_US/index.shtml; Wikipedia contributors, "World's Fair," *Wikipedia, The Free Encyclopedia,* accessed August 28, 2016. https://en.wikipedia.org/w/index.php?title=World%27s_fair&oldid=735105745; "Expos Q&A," Worlds Fair, Inc., 2015, http://worldsfairs.com/expos-qa; John E. Findling, and Kimberly D. Pelle, *Encyclopedia of World's Fairs and Expositions* (Jefferson, NC: McFarland, 2008).

[163] "The 1928 Paris Convention," Bureau International des Expositions (BIE), accessed August 25, 2015.

2015, 168 nations participated in the organization.[164] World's Fairs are currently

organized in four main categories based on their size and scope: *World Expos*,

International Specialized Expos, *Horticultural Exhibitions*, and *The Triennale di Milano*:

- World Expos, or Registered Expositions (previously known as Universal

  Expositions), are large-scale elaborate and ornate gatherings and pavilions that

  take place every five years and last for no more than six months (with the

  exception of the New York World's Fair in 1964–1965—an unsanctioned

  World's Fair—that lasted for almost two years). These Expositions feature

  pavilions built by the participants (nations, companies, and others).[165]

- International Specialized Expositions (previously known as Recognized

  Expositions) are smaller-scale secondary events, which take place once between

  World Expos for shorter time frames of approximately three weeks to three

  months and focus on a singular topic area.[166]

- Contemporarily, there are tertiary events that include Horticulture Exhibitions,

  which are partnerships between BIE and AIPH/IAHP (International Association

  of Horticultural Producers)[167] and act as garden fairs that can occur every two

http://www.bie-paris.org/site/en/bie/the-1928-paris-convention.

[164] "Dubai formally granted Expo 2020 at BIE General Assembly," Bureau International des Expositions (BIE), accessed August 1, 2016. http://www.bie-paris.org/site/en/component/content/article/131-news-announcements/expo-dubai-2020/1094-dubai-formally-granted-expo-2020-at-bie-general-assembly?Itemid=1009.

[165] "World Expos." BIE, accessed July 25, 2016. http://www.bie-paris.org/site/en/expos/about-expos/expo-categories/world-expos.

[166] "International Specialized Expos," BIE, accessed July 25, 2016. http://www.bie-paris.org/site/en/expos/about-expos/expo-categories/international-specialized-expos.

[167] "Horticultural Exhibitions," BIE, accessed July 25, 2016. http://www.bie-paris.org/site/en/expos/about-expos/expo-categories/horticultural-exhibitions.

years, and the Milan Triennial Exhibition of Decorative Arts and Modern

Architecture.[168]

A notable list of inventions have appeared at the World's Fairs, including

everyday items we take for granted and many items that were utilized at Hull-House.

Inventions that premiered to large-scale audiences at World's Fairs include the elevator in

1853; the sewing machine in 1855; the calculating machine in 1862; the telephone in

1876; outdoor electric lights in 1878[169]; the Eiffel Tower and gas powered automobiles in

1889; the Ferris Wheel in 1893; motion pictures in 1900; controlled flight, the wireless

telegraph, and ice cream cones in 1904; Kodachrome photos in 1915; television in 1939

(New York); atomic energy in 1939 (San Francisco); computer technology and fax

machines in 1964; moon rocks (and the E.A.T. installation) in 1970; advances in robotics

in 1985; and energy efficient buildings in 2005.[170]

Exposition Commonalities: Ramifications and Issues

The histories of World's Fairs/Expositions reveal common and collaborative

elements, including the identification of industrial and civic projects and their innovations

for the public good. Specific examples with long-lasting implications and material

benefits for the ecology of human care are noted in two meaning spaces:

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[168] "The Triennale di Milano," Bureau International des Expositions (BIE), accessed July 25, 2016.
http://www.bie-paris.org/site/en/expos/about-expos/expo-categories/the-triennale-di-milano

[169] It is interesting to note that in my research at Hull-House, I found that Jane Addams had used electric lights at the turn of the century. From an information display in the Museum: "Jane Addams and the residents of Hull-House saw how the new technology could improve quality of life in the community and began to produce electricity using coal-fired, steam-driven generators. The electricity was used at the Settlement and was also sold to neighbors at fair rates."

[170] "Expos Q&A" 2015, Worlds Fair, Inc., http://worldsfairs.com/expos-qa.

- political and economic ramifications for partnerships, collaborations, and cooperative efforts towards the instantiation of industrialization and transformative public works projects and/or city-wide investment in transportation (of all kinds), communication, and sanitation for public health and wellbeing and

- cultural exchange and a multitude of social issues raised in conjunction with featured pavilions/buildings, especially in relationship to education and human social ecology.

Each of these categories accentuate the overarching utopian ideals and goals of these events in setting the stage for increased visibility and the recognition of their possible replicability in future infrastructures across the globe.

In reviewing the history of these "experiences," it is possible to trace themes and enactments from discovery to progress and from harmony to nature's wisdom (sustainability). At each stage of development, the World's Fairs have attempted, and in most cases succeeded, in addressing the new scopes and scales of how culture could sustain and potentially thrive into advancing emergent media prospects of the day for the world.[171]

The sectoring of markets and the siloing of conceptual frameworks by corporations at the early part of the last century laid the groundwork for increased differentiation and specialization of modes of thinking. But as the Fairs evolved into the current century, it is more than evident to see the cross-fertilization of disciplinary categories beginning to show up at various Expos.

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[171] See "World Expos," BIE.

Finally, although these occurrences were almost always temporary projects and installations, their significance foreshadow and feedforward[172] in ways similar to Dewey's notion of dramatic rehearsal, at a different scale, pace, and pattern, by bringing and distinguishing care and repair in making the future present.

While World's Fairs/Expos have been lauded and praised by a wide range of commentators, they have also attracted their share of criticism. For instance, Tennyson called the Great Exhibition of 1851 "the world's great fair."[173] However, in *The Arcades Project*, "Grandville, or the World's Exhibition," Walter Benjamin criticized them as follows:

> World exhibitions glorify the exchange value of the commodity. They create a framework in which its use value becomes secondary. They are a school in which the masses, forcibly excluded from consumption, are imbued with the exchange value of commodities to the point of identifying with it: "Do not touch the items on display." World exhibitions provide access to a phantasmagoria, which a person enters in order to be distracted. Within these *divertissements*, to which the individual abandons himself in the framework of the entertainment industry, he remains always an element of a compact mass. … The enthronement of the

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[172] I. A. Richards coined the term in 1951 at the 8th Macy Conference. Physicist Robert K. Logan notes in his article, "Feedforward, I. A. Richards, Cybernetics and Marshall McLuhan," that feedforward can be defined as proactive versus the reactive state of affairs of feedback. The term "made a big impression on his former student, Marshall McLuhan, who states in a letter to Richards, "Your wonderful word 'feedforward' suggests to me the principle of the probe, the technique of the 'suspended judgment'…." In I. A. Richards, "Communication Between Men: The Meaning of Language," in *Transactions of 8th Macy Conference - Cybernetics: Circular Causal and Feedback Mechanisms in Biological and Social System*, ed. Heinz Foerster (New York: Josiah Macy, Jr. Foundation, 1952); Marshall McLuhan, Matie Molinaro, Corrine McLuhan, and William Toye, eds., *Letters of Marshall McLuhan* (Toronto: Oxford University Press, 1987).

[173] "Expos Q&A."

commodity, with its glitter of distractions, is the secret theme of Grandville's art.[174]

The next two sections focus on two specific fair/expos that have special meaning for this project, as they involved long-lasting implications and material benefits for the ecology of human care.

1893 World's Columbian Exposition (World's Fair), Chicago, IL

Overview

The theme of the 1893 World's Fair: Columbian Exposition in Chicago, Illinois was "Discovery of America." It was a period characterized by fragmentation, class tension, the growth of industrialization, and increased immigration. Thus, the hope was that the Fair would serve to overcome fragmentation as previous World's Fairs had done.

The Chicago Fair was designed by John Wellborn Root, Daniel Burnham, and Frederick Law Olmsted and represented a prototype for future cities. "It was designed to follow Beaux Arts principles of design, namely French neoclassical architecture principles based on symmetry, balance, and splendor."[175] Architecture, sculpture, and painting were featured, including world reknowned designers, artist, and architects. "The 14 main pavilions, known as the Great Buildings, were conceived following classical architecture."[176]

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[174] Walter Benjamin and Ralph Tiedemann, *The Arcades Project* (Cambridge, MA: Harvard University Press, 1999), 18.

[175] Wikipedia contributors, "World's Columbian Exposition," *Wikipedia, The Free Encyclopedia,* https://en.wikipedia.org/w/index.php?title=World%27s_Columbian_Exposition&oldid=732883079.

[176] "1893 Chicago," Bureau International des Expositions (BIE), accessed June 5, 2016, http://www.bie-paris.org/site/en/1893-chicago.

The event also brought together civic, professional, and business leaders from around the country, who contributed to building "an influential social and cultural event … [which] had a profound effect on architecture, sanitation, the arts, Chicago's self-image, and American industrial optimism."[177] The 1893 Fair exuded American exceptionalism and featured pavilions from 46 nations.[178]

Infrastructure and Material Concerns

The World's Fairs brought together political and economic ramifications through partnerships, collaborations, and cooperative efforts. These efforts many times led towards the instantiation of modes of industrialization along with transformative public works projects and/or city-wide investment in transportation (of all kinds), including the electrification of the city by electrical grid, communication, and sanitation for public health and well-being.

This last point is worth emphasizing, as the physical infrastructure of the 1893 World's Fair required dealing in advance with external material systems of sanitation (and an exhibit dedicated to hygiene and sanitation).[179] The Fair site became an experimental headquarters for Chicago. As noted in the previous section on Jane Addams:

> Filthy streets and poor sanitation pervaded the cities, even in the wealthiest
> sections of town … the poverty in the city center, as the wealthy escaped the

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[177] Wikipedia contributors, "World's Columbian Exposition."

[178] "Bird's-Eye View of the World's Columbian Exposition, Chicago, 1893," *World Digital Library* [Library of Congress]. https://www.wdl.org/en/item/11369.

[179] World's Columbian Exposition and James B. Campbell, *The World's Columbian Exposition Illustrated: Devoted to the Interests of the Columbian Exposition, Art and Literature. vol. II, no. I* (Chicago: J.B. Campbell, 1892), 229.

growing urban blight using improved mass transit to live in their pseudo-rural

suburbs, while the poor suffered with open sewage trenches and frequent TB

epidemics. […] Over and over again, journals, letters, reminiscences all celebrated

the beauty and serenity of the World's Columbian Exposition. The well-managed

and seemingly uncorrupt Fair had unbelievably clean streets, well-behaved

crowds, the most advanced sanitary and transportation systems, and most of all it

was beautiful—so unlike the gray and dusty cities many of the visitors had come

from. In many respects, the Fair in fact was a utopia.[180]

New habits and habitats needed to be conceptualized, engineered, and

implemented at the Fair. The event created the conditions for new material processes to

be enacted; deliberation and dramatic rehearsal (as noted previously) were employed in

the conception, construction, and invention of spaces for healthy, artful living. In this

planning for a massive influx of attendees, the designers worked to mitigate in advance

issues that might arise.[181]

Under the leadership of Director of Works, the architect, Daniel Burnham, the

Exposition Affairs Committee was tasked with building what was in effect a "city

within a city," which though it might be artificial could expect real problems, not

just from disease, but also from crime, accidents and fire. The prevention of

contagious disease was not only a concern for the millions of visitors expected,

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[180] Julie K. Rose "Reactions to the Fair," American Studies, University of Virginia, August 1, 1996. http://xroads.virginia.edu/~ma96/wce/reactions.html. From the site: "This hypertextual thesis explores the Exposition through a virtual tour, investigates visitor's reactions to the Fair, and analyzes the social, political, and cultural legacies of the World's Columbian Exposition."

[181] Tamara Wolski, "The World's Columbian Exposition's Lasting Effect on Chicago," a paper for History 5050 ("American Architectural History"), Eastern Illinois University, Spring 2009, 169.

but also for the 30,000 or so construction workers, many of whom came to the city seeking work and were to be housed on site.[182]

Jane Addams, the Women's Building, and the Children's Home

One important feature of the Columbian Exposition was the Women's Building, where Jane Addams lectured during the 1893 event. The setting differed dramatically from the previous Fair, as one historian noted:

The Women's Pavilion at the Centennial [International] Exposition [of 1876] had been controversial because of the way in which it was funded and for the perception that it was in a second-class category. In contrast, the Women's Building at the Columbian Exposition was seen as proof of female inclusion.[183]

The organizers of the Women's Building also secured funding for the Children's Home at the World's Fair, where lessons of child development were demonstrated.[184] In conjunction with the exhibition, they cared for 10,000–11,000 children from every state in the country. A student-centered approach was engaged to illuminate information about "foreign countries, their languages, manners and customs, and important facts connected with their history."[185]

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[182] Bronwyn Rae, "Water, Typhoid Rates, and the Columbian Exposition in Chicago," *Public Health Review* 2, 2 (2015). (Published by Northwestern University Feinberg School of Medicine.)

[183] "World's Columbian Exposition in Chicago, 1893," in *Women Working, 1800-1930* (Open Collections Program, Harvard University Library). http://ocp.hul.harvard.edu/ww/columbia.html.

[184] M. W. Seymour and Connecticut Board of World's Fair Managers. *Report of the Commissioners from Connecticut of the Columbian Exhibition of 1893 at Chicago: Also, Report of the Work of the Board of Lady Managers of Connecticut* (Hartford, CN: Press of the Case, Lockwood & Brainard, 1898), 210.

[185] World's Columbian Exposition and Moses P. Handy, *The Official Directory of the World's Columbian Exposition, May 1st to October 30th, 1893. A Reference Book of Exhibitors and Exhibits; of the Officers and Members of the World's Columbian Commission, the World's Columbian Exposition and the Board of Lady Managers; A Complete History of the Exposition. Together with Accurate Descriptions of all State,*

Interestingly, what set this apart from typical childcare environments was that these talks were presented by the children themselves. The children acted as docents (like in a museum), bringing other children into a participatory engagement with the World's Fair exhibits. The teachers facilitated this approach by supervising and training the children in "inventions of mechanics and scientist." For example, one of the Commissioners' reports of the Exposition noted that these talks included information on "the steam-engine [transportation] or photographic or telegraphic [communication] instrument … [with] the principles of sciences, which may be useful to him during his entire life."[186] In expanding the reach of the Exposition, the Educational Exhibit of the Public Schools of Illinois provided, demonstrated, and modeled a comprehensive curriculum,[187] as well as instructional practices for elementary through secondary education.[188]

One noteworthy speaker at the Columbian Exposition was Mary Venette Hayes, who extolled the virtues of Jane Addams's Hull-House as an innovative experimental environment for the cultivation of techniques in music education.[189]

I greatly doubted the success of the experiment, but … some of the pupils have committed an entire piece of music to memory before playing it upon the piano,

Territorial, Foreign, Departmental and Other Buildings and Exhibits, and General Information Concerning the Fair (Chicago: W.B. Conkey Company, 1893), 181.

[186] Ibid., 211.

[187] The State of Illinois, Board of World's Fair Commissioners, *Report of the Illinois Board of World's Fair Commissioners at the World's Columbian Exposition: May 1-October 30, 1893* (Springfield, IL: [H.W. Rokker, Printer], 1895), 389-402.

[188] Ibid., 493-495.

[189] Mary Venette Hayes, "Piano Playing Without Piano Practicing," in Mary Kavanaugh Oldham Eagle and World's Columbian Exposition, *The Congress of Women: Held in the Woman's Building, World's Columbian Exposition, Chicago, U.S.A., 1893, with Portraits, Biographies and Addresses*. Official edition. Women and Social Movements, International (Chicago, Monarch Book Company, 1894).

showing that even hearing the tone is unnecessary to an intelligent understanding

of a composition. … This subsequently developed into one of the most valuable

features of the class. … Wishing to avoid the usual relations of teacher and pupil,

I encouraged the children to form a club. … In spite of every obstacle, at the end

of six months they were playing as well as many children practicing two hours a

day. … It is the musical intelligence that make expression and guides technical

ability, and music is not found through weary hours of struggling with technic.[190]

Dewey at the Columbian Exposition

There also were many Congresses (international conferences or symposiums)

associated with the Columbian Exposition that were held in the new Art Institute building

at Michigan and Adams. As another history of the exposition explains: "These were the

brainchild of Chicago lawyer and educationist Charles Carroll Bonney. There were

Congresses on medicine, education, finance, temperance, evolution and art. … Josiah

Royce and John Dewey participated in the Congress on philosophy."[191] Dewey's lecture

was "On the Reconciliation of Science and Philosophy."[192]

It is interesting to note that many years after Dewey's lecture, from 1922 to 1934,

he would publish four seminal works, *Human Nature and Conduct*, *Experience and

Nature*, *The Public and Its Problems*, and *Art as Experience*. Each volume laid the

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[190] Ibid., 474-476.

[191] Stanley Appelbaum, "From Opening Day to Closing Day, and Beyond," in *The Chicago World's Fair of 1893: A Photographic Record, Photos from the Collections of the Avery Library of Columbia University and the Chicago Historical Society* (New York: Dover Publications, 1980), 106.

[192] "Proceedings of Scientific Societies," *The American Naturalist* 27, no. 323 (1893): 1028-037. Published by The University of Chicago Press for The American Society of Naturalists); Jay Martin, *The Education of John Dewey: A Biography*. (New York: Columbia University Press, 2002),133.

foundations for the subsequent work. Themes from the books include the role of deliberation and dramatic rehearsal in an ethical life; a philosophy of experience including a methodologically pluralistic account of culture that takes a meliorisitic, problem-solving approach overall; an integrative view of the role of experts and the public, especially in regards the publicity and the press; and an embodied view of aesthetics that engages art as a consummate form of communication. This leads us to brief remarks about Dewey's references to the 1933 World's Fair.

Dewey and the 1933 World's Fair

Building on the transformative infrastructure of the 1893 Palace of Fine Arts, the 1933 World's Fair (Exposition), also took place in Chicago from May through November 1933. The theme was "A Century of Progress" and significantly, the Jane Addams–inspired MSI debuted at the event on the site of the Palace of Fine Arts building.[193] As noted on the Museum website, "MSI is the place where generations have been coming to see what's next [and is] home to the Western Hemisphere's largest science museum."[194]

In a lecture to the First International Assembly of the World Fellowship of Faiths in 1933, Dewey refers to the 1933 World's Fair twice in his piece " Needed—A New Politics." This is pragmatist *openness* as a value and valuation orientation, moral philosophy, and praxis for a new ecology; he portrays in the light of the

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[193] "Museum of Science and Industry," Chicago Architecture Foundation, Chicago, Illinois. http://www.architecture.org/architecture-chicago/buildings-of-chicago/building/museum-of-science-and-industry.

[194] "Museum Facts," Museum of Science and Industry, Chicago, Illinois. http://www.msichicago.org/explore/about-us/museum-facts.

advancement of knowledge, to the advancement of science, of technical skill and

of invention in this country. … We have them here in this room in the mere fact of

this electric lighting, which has come to us within the life of almost every one

here to-night. We have them with the telephones, with our motor cars, with our

means of transportation and communication, with the radio. All of these things

have come to us, most of them within the last thirty years … the most tremendous

growth of insight into the hidden, the mysterious forces of nature.[195]

This new ecology of meanings, of legacy media, is a necessity. Dewey presages today's

digital open access archives of the sciences and humanities by invoking the Fair as a

common ground between social and political life. He encourages us to foster care and

repair at the level of "the problems of the relations of neighbors—of neighboring peoples,

classes, countries of the world to each other!"[196] This curation is not as a "patching" or

mere remedy/cure but as a thoughtful investment in reconceptualizing our modes of

collective inquiry. Three years later, Dewey states that we require a

fundamental re-thinking of our social and political relations and the development

of a new conception of what government is for: an instrument in the service of the

people and not, as under the system of competition for power and competition for

command of power, the tool and instrument of selfish acquisitive interests.

He continues that we must as a humanity transform our habits toward "methods of

emulation and of cooperation"[197]:

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[195] John Dewey, "Essays: Needed—A New Politics," in Vol. 11 of *The Later Works, 1925-1953*
(Charlottesville, VA: InteLex Electronic Edition, 1935-1937/2008), 275-276.

[196] Ibid., 279.

[197] Ibid., 280.

a very great change in the thinking and in the actions of men which will prepare

us for a much more cooperative and a much more humane social order than that in

which we have been living … [and] belief in the public and in the right of the

public to share in whatever is gained by humanity![198]

Is this an allusion to the scholar open access journals and open source projects

writ large, including the desire for flexibility of documents and "trail blazing" (as will be

noted in Chapter IV)? From cybernetics introduced with Gregory Bateson and the Macy

conferences to the applications of an ecological framework, we are currently at the

precipice of an emergent art-science ecology. As we will see in Chapter IV, as a species

we are enacting in conceptual and material spaces, what may be described as *open

technology*, where emergent media become beneficial to humanity.[199]

Exemplar 3: **The Barnes Foundation, Philadelphia, PA**

Overview

The final exemplar presents the formal curatorial approach embraced, created, and

represented by Albert Barnes and John Dewey's vision and implementation of the Barnes

Foundation. Founded in 1922, the original site was in Merion, Pennsylvania, but the

Foundation was subsequently relocated (controversially) to Philadelphia in 2012. The

Barnes Foundation's mission was/is to

promote the advancement of education and the appreciation of the fine arts and

horticulture. The Foundation carries out its mission through teaching, research,

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[198] Ibid., 180-181.

[199] John Dewey, *Freedom and Culture*, in Vol. 13 of *The Later Works, 1925-1953*. (Charlottesville, VA: InteLex Electronic Edition, 1938-1939/2008).

and other programs related to its Art and Arboretum, as well as through public

access to the Gallery which houses its main collection of paintings, sculpture, and

other works of art.[200]

As in the discussion of Jane Addams and Hull-House, an on-site interview

highlights this section and features Nancy Barth, a past Co-Chair of the Alumni Council

of The Barnes Foundation's Alumni Association and currently a docent for the

Foundation. She met with me at the Barnes Museum in Philadelphia to discuss her

experiences with the foundation, which she started at the Merion location.[201]

Introducing The Barnes

Albert Coombs Barnes's notion of an arts-based educational nonprofit corporation

(institution) was founded on self-reflection while studying the work of and in

conversation and correspondence with John Dewey. My research corroborates that they

influenced each other greatly. Indeed, Barnes's interactions and experience design (which

might be thought of as a precursor to intermedia, as discussed in Chapter II) were the

foundation for Dewey's *Art as Experience* in 1934.

Barnes was the multidimensional interstitial producer and curator of his foundation.

As orchestrator of his own critically composed symbolic symphony of global art, Barnes

crossed cultural and sociological barriers converging artworks and their dialogues into

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[200] "Mission," The Barnes Foundation, Philadelphia, PA; "About," The Barnes Foundation, Philadelphia, PA; Botanic Gardens Conservation International (BGCI), "About the Arboretum of The Barnes Foundation," http://www.bgci.org/garden.php?id=684.

[201] The interview was conducted on October 10, 2015, at The Barnes Foundation's main atrium and during a one-on-one tour with Barth. It occurred synchronistically just two days after my presentation at the Pennsylvania Communication Association (PCA) Pre-Conference on "Patterns of Connection: Gregory Bateson, American Pragmatism and European Philosophy" at Pennsylvania State University, York, PA (October 8, 2015). My talk was entitled, "Metapatterns: Communication, Pragmatism, and Curation," portions of which are utilized throughout this dissertation.

interactive installations and bridging practical art (e.g., metalworks and furniture) and high art (e.g., painting and sculpture). For example, Barnes owned 180 Renoir paintings but integrated selections of these works in response to what were commonly deemed as merely technical craft arts.

During the site interview, Nancy Barth referred to the paintings in the collection as Barnes did: "Light, line, color, and space are the four elements." These elements are to be "analyzed in a scientific way." She further explained the categories of Barnes's art collection as decorative, expressive, and illustrative. "Renoir fell into two categories, both decorative and expressive. Matisse definitely decorative. And then, an example of illustrative would be Rousseau. … Everything he wants you to see, you see." The traditions featured in the collection include: 1) Florentine art, 2) Venetian art, 3) Dutch art, 4) Japanese prints, 5) African sculpture, and 6) Native American Navaho textiles, clay pots, and jewelry.

Barnes can be seen as an arts educator's arts educator, inventing an associated aesthetic receptivity to art history along with horticulture courses and lessons in resonance with a museum-classroom environment and arboretum for the imagination to come to life. As noted in the subtitle and inside cover of *The Architecture of the Barnes Foundation* (2012), the Foundation aspired to be a "gallery in a garden, garden in a gallery."[202]

The historical context of the Barnes Foundation is similar to that of Jane Addams's Hull-House. Early 20th century America was a period of massive change as the country was shifting from an agricultural and rural economy to an industrial and

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[202] Tod Williams, Billie Tsien, Octavia Giovannini-Torelli, and Michael Moran, *The Architecture of the Barnes Foundation: Gallery in a Garden, Garden in a Gallery* (Philadelphia, PA: Skira Rizzoli, in association with the Barnes Foundation, 2012).

urban society and was burgeoning with newly arrived immigrants from around the world, especially Europe.[203] In Dewey's and Barnes's views, private collections of the wealthy, such as cabinets of curiosities and grand museums, had outlived their purpose primarily as repositories for collection, preservation, and status symbols. In essence, these warehouses of art were not in alignment with the needs of a progressive society.

Dewey's educational theories and Barnes's philanthropy extended these limited notions of a museum into a living experiment and environment for learning. "Reconstructive doing" was essentially the creative aspect of perception, which both Dewey and Barnes felt required cultivation. This cultivation and its outcomes brought to fruition greater perception, redefining and incorporating education as an essential role of museums.[204]

Barnes was a doctor by training, thus his approach and intellect was formalistic and scientific, utilizing industrial design (e.g.,, his medical breakthrough of an antiseptic silver compound called Argyrol).[205] Barnes applied his studies of habituation and the source of funded meanings, which he called the " 'genus loci' of a work of art—that is, 'the human conditions under which was brought into being and from the human consequences it engenders an actual life-experience.' "[206]

The Barnes Foundation was a place and space for social learning, although access by the public required reservations. The correspondence between Dewey and Barnes and

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[203] Elizabeth Anderson, "Dewey's Moral Philosophy," *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta (Spring 2014 edition). http://plato.stanford.edu/archives/spr2014/entries/dewey-moral.

[204] See Tracie E. Costantino, "Training Aesthetic Perception: John Dewey on the Educational Role of Art Museums," *Educational Theory* 54(4) (2004): 399-417.

[205] Barnes Foundation - Dr. Albert C. Barnes, http://www.barnesfoundation.org/about/history/albert.

[206] Costantino, "Training…," 411.

Barnes's founding of the Foundation exemplified this process. In fostering deliberation in an academic and civic setting, Barnes was able to engage the public in educative discourse relating art and life. Additionally, through his use of dramatic rehearsal (or what might be called scenario planning today) for future engagement (which will be further developed later in this section), Barnes would foster time and space for these conditions to emerge, especially in the face of changing conditions that were always in play.

It seems clear that Barnes's and Dewey's deliberations expanded the dialectic of the ordinary museum to a more plastic form, influencing interactions of visitors, who were now understood to be students. Barnes explains the guiding principle of the foundation as follows:

> Art is no trivial matter ... but a source of insight into the world, for which there is and can be no substitute, and in which all persons who have the necessary insight might share. This insight, however, is impossible except by the aid of others' insight, especially of the insight of the past.[207]

Deliberation and Aesthetic Praxis

Albert Barnes's and John Dewey's fusion through careful deliberation acts "as the essence of philosophical practice ... a practical instrument in the inevitable process of negotiations between the organism and the environment."[208] This dramatic rehearsal in

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[207] Albert Barnes, "Preface," in John Dewey and Albert C. Barnes, *Art and Education* (Merion, PA: The Barnes Foundation Press, 1929), x-vi. (Originally published in *The Journal of the Barnes Foundation.*)

[208] Yoram Lubling, "Deliberation as a Dramatic Rehearsal: John Dewey and the Future of Philosophy," *Contemporary Philosophy* 21, 3-4 (1999): 37-42.

the imagination,[209] a form of "reflective intelligence to revise one's judgments,"[210] is key

to Dewey's *Human Nature and Conduct*.

Scenario planning (especially as related to systems thinking)[211] in business,

anticipation in music,[212] and anticipatory systems (complex natural cognitive systems) in

reinforcement learning[213] can be viewed as a means of deliberation. Whereas an a priori

perspective holds to an ultimate or teleological view, Dewey's and subsequently Barnes's

notions were of malleable habits. In moving beyond the prevailing trends of the time

(philosophical modernism), this deliberative sensibility set forth a nondualistic approach

to expanding people's awareness. Aesthetic perception was one of several goals.

Dewey's method of instrumentalism would lead to broadened experience, access,

diversity, and democratization but most importantly to perception itself. As James Panero

explicates:

> Barnes believed that the development of cognitive skills, rather than the
>
> memorization of facts, was the key to education. To understand art, then,
>
> everything you need to know is right there in front of your eyes, if only you
>
> understood how to see it. In arranging his art on the wall, Barnes thus dispensed
>
> with labels, period rooms, chronological order, and the solemnity of your typical
>
> white-walled gallery. Instead, with his art hanging floor to ceiling, Barnes let the

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[209] John Dewey, *Human Nature and Conduct* in Vol. 14 of *The Middle Works, 1899-1924* (Charlottesville, VA, 1922/2008).

[210] Elibabeth Anderson, "Dewey's Moral Philosophy."

[211] Diana Scearce and Katherine Fulton, *What If?: The Art of Scenario Thinking for Nonprofits* (Emeryville, CA: Global Business Network, 2004).

[212] David Huron, *Sweet Anticipation: Music and the Psychology of Expectation* (Cambridge, MA: MIT Press, 2006).

[213] Margaret Yelloly and Mary Henkel, *Learning and Teaching in Social Work: Towards Reflective Practice* (Bristol, PA: Jessica Kingsley, 1995), 28.

harmony of shapes and forms sing for itself. He wanted his collection to enliven

the eye, not confound it with facts. He believed his students would be able to see

the visual connections between disparate works, styles, and periods, and learn

from those associations.[214]

Dewey's and Barnes's approaches remind us that just as knowledge cannot be

separated from practice, art cannot be separated from everyday life. Art and aesthetics are

potential means to increase human capacity and perception. Recognizing the historical

unity of the artisan and craftsperson, fine and applied arts are unified in experience.

Perception is then essential to the meaning-making process, which Dewey believed

underlies the values of aesthetic experience. Within this context, because art was seen as

a mode of cultivation and a resource, art and aesthetics should be available to everyone,

not only for the elite. This continues an essential component of a democracy in the

postmodern world. As Panero concludes, "Barnes instituted a pedagogy that was intended

to bring democracy to learning."[215]

As Neil Rudenstine (past president of Harvard University) observes, "Dewey was

clearly impressed by Barnes' intellect, energy, and deep commitment to learning as well

as his knowledge of art. He also admired Barnes' genuine concern for democracy and

'equal rights' for all people, specifically African-Americans."[216]

Dewey's art as experience is characterized by growth and consummation, which

together are instrumental in creating new and satisfying situations. Art needs the capacity

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[214] James Panero, "Outsmarting Albert Barnes," *Philanthropy Magazine,* Summer 2011.

[215] Ibid.

[216] Neil L. Rudentine, *The House of Barnes: The Man, the Collection, the Controversy* (Memoirs of the American Philosophical Society, v. 266) (Philadelphia: American Philosophical Society, 2012), 12.

to attract and then retain the interest of the viewer. The art object is not consummatory in and of itself but is causally productive. Perception is then the discrimination, unification, and integration of both emotional and sense-based phenomena in experience.[217]

Criticism of Traditional Museums

In 1934, Dewey criticized traditional museums in *Art as Experience*, when he stated, "the museum conception of art, still shares the fallacy from which that conception springs. For the popular notion comes from a separation of art from the objects and scenes of ordinary experience that many theorists and critics pride themselves upon holding and even elaborating."[218]

Museum educator, George Hein, reiterates Dewey, when he says, "art museums are primarily the products of the capitalist urge to flaunt wealth, and that the fine arts have thus been separated from the rest of life and cloistered in selected, inaccessible places; such practices evoke a destructive dualism—the separation of fine arts from practical arts and of art and its appreciation from other life activities."[219]

The Gallery and the Garden

Another important component of the Foundation was the arboretum, including a garden, which represented an appreciation and cultivation of the biological arts. [220] Barth

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[217] Tom Leddy, "Dewey's Aesthetics," *The Stanford Encyclopedia of Philosophy,* ed. Edward N. Zalta, Spring 2016 ed., http://plato.stanford.edu/archives/spr2016/entries/dewey-aesthetics.

[218] Dewey, *Art as Experience*, 12.

[219] George E. Hein, *Progressive Museum Practice: John Dewey and Democracy* (Walnut Creek, CA: Left Coast Press, 2012), 48.

[220] "The Barnes Foundation: The Barnes Arboretum," http://www.barnesfoundation.org/visit/merion.

explained in the interview: "This was an important part for this couple, Dr. Barnes and Mrs. [Laura] Barnes. It was her baby." She continues, "They had a couple people who would give a tour … showing pictures of certain paintings in the gallery and talking about the plants and where they fit in, and likewise … they had … somebody come and examine all the plants … and opened the horticulture school. … Mrs. Barnes was the one who was in charge of the horticulture, more than Dr. Barnes, but there's a [very] definite connection between the art and the horticulture."

In my opinion, the Barneses may be seen as early adopters of a bio-art or bio-media approach (discussed in Chapter VI). In the interview, Barth offered her own explanation of an interdisciplinary ethics and aesthetics, when she said, "it was so profound in comparing the paintings and the plants, and how they arranged it. It was just terrific." In the following section, it is interesting to note that the Barneses follow a somewhat parallel framework to World's Fairs/Expos, engaging both a Horticulture garden and exhibition space.

The Barnes Moves from Merion to Philadelphia

The collection was relocated to Philadelphia from Merion in 2012. It should be noted that the Barnes Foundation had been in a protracted legal debacle regarding its removal to a larger "museum" space.[221] In the various cases,[222] the desire of the Barnes Foundation Indenture, Selected Provisions, As Amended (December 6, 1922) was to keep

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[221] Neil L. Rudenstine, *The House of Barnes*; Lenny Feinberg, Sheena M. Joyce, Don Argott, West Dylan, Thordson, Demian Fenton, 9.14 Pictures, MAJ Productions, IFC Films, and MPI Media Group, *The Art of the Steal* (New York: IFC Films, MPI Media Group, 2010).

[222] "Public Access: The Barnes Foundation," in *Law, Ethics, and the Visual Arts*. 5th ed., eds. John Henry Merryman, Albert E. Elsen, and Stephen K. Urice (Frederick, MD: Kluwer Law International, 2007), 1175-1189.

the collection "solely and exclusively for education purposes" and "the purpose of this gift is democratic and educational in the true meaning of those words, and special privileges are forbidden."[223]

After my visit, one hope was that the Foundation would facilitate these goals at the new site and especially that the collection would be utilized in emergent ways as a legacy educational institution, similar to the Arboretum in Merion. This thought is echoed by Rubenstein: "the architectural success of the new Barnes will enable it to improve and broaden the nature of its educational programs. People from every walk of life will be able to participate in one or another form of art education."[224] Another hope is that one day the collection can be reinterpreted or remixed (in a contemporary sense) as Barnes had done during his life. In the following section, I offer some thoughts and reflections on the significance and findings of my field research at the new site.

Observations at the Barnes

During the site visit to the Barnes Foundation in Philadelphia in 2014, I observed what I felt was the disengagement of audience from artist and attendees from one another, with the use of headphones and prerecorded explanations of the collection. It seemed to me and to other visitors who I informally surveyed to be quite a different experience from the Foundation's mission and from Dewey's and Barnes's notion of *Art as Experience.* From my notes:

> There is a sense of loss when entering this seeming mausoleum. An eerie sense of quiet permeates the spaces, as people, gallery goers, silently move around with

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[223] Ibid. 1176.

[224] Rubenstein, 195.

headphones on, unfazed by each others' presence. A wandering sense of
virtuality. Where is the interaction, where is *art as experience*? I wandered
through many rooms on the first floor connected by corridors and wondered:
where is the gallery as laboratory?[225]

I visited one of the Barnes's learning rooms—a postmodernesque classroom
complete with a brief, repetitive video installation of the history and development of
Barnes's ideas and most especially his aesthetic pedagogy. I decided to strike up a
conversation with a few people who were watching the video. My notes continue:

I am discussing these observations with some of the gallery goers. They concur
with the sense of immensity of the new space, but also "silence." The sense of
vibrancy is being transmitted now … the video presentation features words on the
screen, drawing one's attention to a wooden wall with an 80″ HD LCD screen. No
change to the size of the classroom or the number of people transfixed … the
outside contained *inside* the Foundation is now only homage to the arboretum.

Why such a quiet space? Visitors attending were offered headphones with
prerecorded lectures about the exhibition spaces. I see a parallel to this
observation in how I see my students becoming more and more submerged,
immersed, in the distinctions between analogue/tactile (i.e., kinesthetic) versus
everything on a screen (i.e. ,visual) and digital-only worlds. How can we
reimagine a higher fidelity integration versus the ghost lost between the cracks
and seams of digitization?

(These thoughts will be expanded in Chapters IV and V.)

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[225] Notes from Barnes Foundation, Philadelphia, PA, October 10, 2015, 3:03pm.

My notes further indicate that something changed on the second floor: "attendees seem more at home and animated in the galleries. The docent tour participants seem to be more like the art students I read about in my research." Barth reiterated in the interview that this interaction was part of Barnes's process.

Barth also enthusiastically mentioned that, "he [Barnes] used to play music. You saw that record player in the main gallery? He would love to play music." As she said this, I remember thinking that I could hear a silent, reverberating echo in the corridors, a sort of yearning for an even deeper acoustic sensibility to emerge.

From a critical perspective, there was a kind of the static nature to the contemporary exhibition. At the new location, none of the artworks are allowed to be deaccessioned (meaning sold to other institutions or collectors) or transposed from their original places or their relation to one another at the original site. One wonders why this collection must remain unchanging if what Dewey and Barnes were looking for was not a static account of art but an evolving experience, thus representing an enactive notion of curation.

This situation becomes especially obvious when viewing photos of the original museum site on the Internet and then finding the exhibit without a single change or update. It seems likely that Barnes would have constantly been improving and remixing his collection. Where is the life he wanted to breathe into the participants? Rather than merely audiences, would he rather have had coinvestigators or cointerrogators?

During the tour, Barth added other criticisms: "They used to say there was no place to sit down [in Merion] and the French felt there was no place for café." For what it is worth, the Barnes now has a full service café at its new Philadelphia location.

Barth also pointed to other interesting features of the placement of artworks. As she explained,

> Cezanne's perspective does not come from the front, but since it can come from any direction, Cezanne lost the line in the painting. Barnes would [also] transform wood pieces [from Africa]. Barnes liked ladies hats and their position.

During my visit, I observed that Barnes had created conversations between works of art. Most notably, Barth pointed to a two-dimensional painting with a nude, placed above and in relationship to a three-dimensional chair. The relational work can be considered how the 2-D nude "could" be seated in the actual 3-D chair. This reminded me of how artists such as Marcel Duchamp and, more recently, Tom Marioni have worked in a similar ways.[226] Marioni plays with the spatial sensibilities of the viewer by placing objects in dialogue with one another. While visiting his artist studio next to the San Francisco Museum of Modern Art, he explained this relational aesthetic of placing a light source onto a replica of Duchamp's *Paris Air*, which in turn cast a shadow of a question mark on the wall, which Man Ray's photo of an eye would be looking at.

This conceptual meets relational aesthetic sensibility offers a deep assessment of how Barnes was able to communicate multidimensional perspectives, not merely with works of fine art but with the practical arts of metalwork and furniture as well. It is interesting to note that this performative quality was also evident at Hull-House, where theater and live music were juxtaposed with traditional works on the walls.

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[226] An interesting essay that discusses possibilities like the one Barth mentions and that I offer as the "interstice" of artworks and the environment, is by curator Nicholas Bourriaud. See Nicholas Bourriaud, "Relational Aesthetics," in *Participation,* ed. Claire Bishop (London: Whitechapel [MIT Press], 1998/2006), 160-171.

Again, Barnes's notion of the museum as an educational institution was based on self-reflection while studying under Dewey. Barnes's integrationist mode of inquiry (curation) converged high art and practical art and their subsequent dialogues into interactive installations. I see Barnes as inventing a Gesamtkunstwerk, an almost operatic-like environment and its associated aesthetic receptivity, art history, and horticulture courses, for imagination to come to life.

Conceptual Blending

As Dewey argued, the cognitive function of *moral imagination* informs and reinforces coevolutionary praxis towards improved flexibility of habits. This plasticity offers the potential for a wide range of new experiences, perceptions, and works of art to emerge. Dewey elaborates and cites Barnes from *The Art in Painting*[227] as follows:

> In dealing with the significance of form in painting, Dr. Barnes has brought out the necessity for this completeness of blending, the interpenetration of "shape" and pattern with color, space, and light. Form is, as he says, "the synthesis or fusion of *all* plastic means ... their harmonious merging." On the other hand, pattern in its limited sense, or plan and design, "is merely the skeleton upon which the plastic units ... are engrafted." This interfusion of all properties of the medium is necessary if the object in question is to serve the whole creature in his unified vitality. It therefore defines the nature of form in all the arts.[228]

In their interpenetration of ideas, experience and educational theory, combined with aesthetic sense and artistic knowledge, the Barnes Foundation exemplifies Gilles

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[227] Albert Barnes, *The Art in Painting* (Merion, PA: The Barnes Foundation Press, 1925), 85, 87.

[228] Dewey, *Art as Experience*, 122.

Fauconnier's and Mark Turner's *conceptual blending*.[229] Dewey compared typical museums to cathedrals, which featured art in rarified domains that divorced the human experience of art from everyday life. The Barnes collection did not have a reverential architecture but instead was designed as an educational means for which deliberative processes would occur for the young/old and rich/poor alike. This was not a determinate endeavor but instead was envisioned as an "ecology" for new perceptual habits to be cultivated. By creating a consummatory experience, the intent was to mold habits of intellect from merely fixed boundaries and closed ends to exercise and maintain indeterminate (flexibility and openness) ends-in-view.[230]

Both Barnes and Dewey distinguished perception from recognition that does not promote growth or understanding. Perception having the effect of habituation begins with identification but continues into causal outcomes. A rigorous scientific praxis without a perceived outcome speaks directly over time to the deliberative process. Thus, aesthetics and morals can be considered social ethics. In an historical context, this collaboration was a successful experiment in applied tenets of American Pragmatism. The Foundation's role was to reinforce this theoretical praxis, or as Constantino notes

> "a scientific aesthetic" ... a means of ordered, objective inquiry ... applied to the
> analysis and understanding of works of art. Barnes believed that such a method
> was desperately needed in the field of art education. In describing the method of
> scientific aesthetics, Barnes critiqued prevailing aesthetic theories, such as the

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[229] See Gilles Fauconnier and Mark Turner, *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities* (New York: Basic Books, 2002).

[230] John Dewey, *Theory of Valuation*, in Vol. 13 of *The Later Works, 1925-1953* (Carbondale, IL: Southern Illinois University Press, 1939/2008), 234.

"academic" approach of those developed by Leo Tolstoy and Clive Bell, for the
isolation of aesthetic experience from everyday experience.[231]

Conclusion

Considering that science is born of the arts, Dewey argued that the ancient Greek
separation of art into "fine" and "useful" neglected the continuity that knowledge has
with experiment and experience. In other words, proactive knowledge is inseparable from
praxis. As Johnson explains:

> the stone (of aesthetics) that had been cast out by traditional philosophy must now
> become the cornerstone of the new philosophy of experience—a philosophy fitted
> to human problems and their solution. … Instead of isolating the "aesthetic" as
> merely one autonomous dimension of experience, or merely one form of
> judgment ... aesthetics is about the conditions of experience as such, and art is the
> culmination of the possibility of meaning and experience.[232]

This conceptual framing, especially in relationship to communication as a discipline, will
be addressed further in Chapter V.

The collaboration between Barnes and Dewey was as much about social
democracy as it was about aesthetics. But this still leaves us with the question: What is
the most reasonable process to unify and harmonize our collective intelligence and
experience as manifested in this endeavor?

No doubt there is an enhanced experience in the tone and tenor of encapsulating
and habituating new habits, customs, and rituals. Dewey's philosophy converged with

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[231] Costantino, "Training Aesthetic Perception," 409.

[232] Johnson, *The Meaning of the Body,* 212.

that of Barnes and was subsequently incorporated into the educational mission statement

of the Barnes Foundation. Similarly, Barnes encouraged Dewey to create a course in

aesthetics. Barnes sent the following passage in a letter to Dewey in 1919:

> Art now is detached from life, whereas it is essentially **life itself.** … You see now
> that we are right in a Socratic dialectic that embraces everything in life and when
> we get along you'll find that art and life are synonymous. … Art, Ethics, Politics,
> Philosophy, will dovetail with Life perfectly.[233] [emphasis added]

Dewey and Barnes recognized the intertwining of moral imagination and

aesthetics perception. In doing so, the two created an exemplar of the blending of what

are still considered radically different domains of inquiry. Thus, Barnes and Dewey offer

us a way of dealing with emerging media (to be discussed in Chapter IV) and even what

Mark Johnson calls a philosophy of experience, a convergence of science, art, law,

education, music, and much more.

Chapter Summary

Curation explores embodied aesthetics, a political economic materiality, and

grounded practical theory by reimagining an integration of communication and art vis-à-

vis experience, culture, and society through shared practices. By focusing on the

relational aesthetics of things and affairs, not only is inquiry conceived as mapping and

reflecting on experience but there is a curatorial engagement in practice, which (in turn)

brings forth new and emerging patterns of experience. Again, repair in information

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[233] Albert Barnes, Letter, Albert C. Barnes to John Dewey, August 20, 1919. President's Files, Albert C. Barnes Correspondence, Barnes Foundation Archives, Merion, PA. This citation also is included in George Hein, *Progressive Museum Practice: John Dewey and Democracy* (Walnut Creek, CA: Left Coast Press, 2012), 110.

technology is an example of a curational approach, as are curing/healing in medicine and problem solving in American pragmatism.

These exemplars are tests to see whether this curational mode of inquiry works and if so what it changes and how it results in a materialist praxis of going out into the world. I have identified these as exemplifying a curational approach, where materiality, art-science, and participation collide. Indeed, Jane Addams's and John Dewey's work at the turn of the 20th century bring us full circle to the care and repair of human environments as an integrated media-medium.

The state comes together for repairing the world as a form of *virtü*, whereby the dramatic rehearsal and deliberation for future generations are brought to bear in the enactment of material situations that encompass all forms of media, including the World's Fairs/Expos (mediums as environment). As Jones argues in her forthcoming book:

> the modern appetite for experience and event structures, which were cultivated around the art at these earlier expositions, have now come to constitute contemporary art itself, producing encounters that transform the public and force us to reflect critically on the global condition.[234]

In today's terms, there are even films advocating for the United States' return to full participation in future Expos.[235]

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[234] Caroline A. Jones, *The Global Work of Art World's Fairs, Biennials, and the Aesthetics of Experience* (Chicago: University of Chicago Press, to be published 2017).

[235] *Century of Progress Exposition: Wings of a Century* (Hollywood, CA: Burton Holmes Films Inc., 1933). http://www.aspresolver.com/aspresolver.asp?AHIV;1533184. (Also available at: https://www.youtube.com/watch?v=TR7Ift7MKxs.)

The constitution of contemporary communication holds no punches and connects all boundaries. Our contemporary world is dependent upon technology to facilitate information and stabilize and ensure "intricate interaction far beyond the limits of face-to-face communities."[236] As Dewey explained:

> A community thus presents an order of energies transmuted into one of meanings which are appreciated and mutually referred by each to every other on the part of those engaged in combined action.[237]

The framework of rapid, efficient, and standardized industry in conjunction with dynamic government and a "pull yourself up by your bootstraps" lifestyle exemplifies the "American spirit." The consolidation of these energies in various forms of technology engaged and resulted in noteworthy inventions: the telegraph, telephone, automobile, radio, and a plethora of consumer durable goods.

But, obviously, industrial society and (as Carey observes) "social life is more than power and trade (and it is more than therapy as well)."[238] Binding forces and continuities of relations exist, which at the turn of the 20th century were complicated by a burgeoning economy, massive immigration, and westward expansion.

Carey notes Raymond Williams's argument that "it also includes the sharing of aesthetic experience ... [as well as] values and sentiments."[239] (This concept will be developed further in Chapter V.) Similarly, Dewey noted that society may be a single

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[236] Dewey, *The Public and Its Problems*, 307; Albert Borgmann, *Real American Ethics: Taking Responsibility for Our Country* (Chicago: University of Chicago Press, 2007), 17.

[237] Dewey, *The Public and Its Problems*, 331.

[238] James W. Carey, *Communication as Culture, Revised Edition: Essays on Media and Society* (New York: Routledge, 2009), 27.

[239] Ibid., 27.

term, but in reality it is an infinite multiplicity of circumstances. "It covers all the ways in which by associating together [people] share their experiences, and build up common interests and aims."[240] For Dewey, this multiplicity applied just as well to experience: "Culture is *at the same time* psychological and collective."[241] This thread was echoed by Charles Horton Cooley, when he "posits a continuity between imaginations."[242]

In this view, communication as a mode of inquiry can be understood as a technology, and likewise, society "is participation in the creation of a collective world,"[243] as "a constellation of practices that enshrine and determine those ideas in a set of technical and social forms."[244]

Over the past century, the founding of new territories brought the movement of people, animals, symbols, artifacts, and embodiments of all kinds across the United States. Speaking and listening to the voices of citizens and folks in neighborhoods, proximal interactions were encouraged. The analogue voices heard in conversations in saloons, barbershops, and general stores provided a discursive space for participation to be communicated. From doctors' and law offices, to fire and police stations, to the courts and moonlight bays, dialogue ensued regarding the health and well-being, safety and security, care, and tenderness of people moving from one symbolic interactor to another.

As the mediums of transportation, transmission, and ritual emerged, so did commerce, trade, and liberty follow unbridled transactions sweeping across the

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[240] Dewey, *Reconstruction,* 194.

[241] Dewey, *Experience and Nature*, 364.

[242] Peters, *Speaking into the Air*, 187.

[243] Ibid., 19.

[244] Carey, *Communication as Culture*, 66.

landscape. Capturing Carey in enthusiastic recognition of Dewey, "the great society created by industry [blossomed] into a great community: a unified nation with one culture." Echoes and reflections of "a continental village"[245] engaged the imaginations and creativity of people from all walks of life. Technology, once thought as merely a tool or process, abstracts into hybrid substantiations in budding media landscapes. The turn of the tide comes from proximal small town living to distally diasporated city life[246] awakened in envy to other burgeoning providences, still awaiting their opportunity.

Wherever possible in this chapter, I have utilized criteria to provide exemplars within real life contexts to gain an understanding of the area of inquiry through thick description. I drew upon six criteria for moving forward based on a case study approach as applied to curational communications research. It is important to note that "Robert Stake (2005) contends that the case study is not a methodological choice, but a choice of object to be studied. ... Ultimately, the research is interested in a process."[247] These would include:

1. the nature of the case, particularly its activity and functioning;

2. its historical background;

3. its physical setting;

4. other contexts, such as economic, political, legal, and aesthetic;

5. other cases through which this case is recognized; and

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[245] Ibid., 110.

[246] Alexandra Chang, *Envisioning Diaspora: Asian American Visual Arts Collectives from Godzilla, Godzookie to the Barnstormers* (Beijing: Timezone 8 Editions, 2009).

[247] Norman K. Denzin and Yvonna S. Lincoln, *The SAGE Handbook of Qualitative Research, 4th ed.* (Los Angeles, CA: SAGE Publications, 2011), 247.

6. those informants through whom the case can be known."[248]

I chose these exceptional and demonstrative models from the past in order to bring attention to the history and transformative nature of legacy media, communication, and experience. They represent, in some ways, the evolution of system administrator (superstructure) and system user (base) identity dichotomies in immersive communications environments. How can one actually create, curate, and collaborate in the 21st century? I have employed document analysis along with ethnographic methods (i.e., interviews and participant observation) that were further developed in relationship to advancing *curational communications research.*

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[248] Norman K. Denzin and Yvonna S. Lincoln, *The SAGE Handbook of Qualitative Research. 3rd ed.* (Thousand Oaks, CA: SAGE Publications, 2005), 447.

CHAPTER IV

EMERGENT MEDIA

Having considered various meanings and derivations of media and provided

historic examplars of civic processes, this chapter explores emergent media. The

discussion reveals that traditional notions of communication and media are being

radically transformed, and thus previous conceptions are not adequate for emergent

media. In a historical context, this applies to legacy media that have been analogue, and

digital media that have emerged and integrated with previous forms. It is therefore clear

that we need a new notion of media as well as curation.

This chapter addresses RQ3: How are material enactions of a curational approach

being utilized in various forms of "emergent media"? This question has also partially

been answered by the discussion of World's Fairs in the previous chapter but will be

addressed here through other brief contemporary examples.

First, to fully understand emergent forms of media, it is essential to briefly define

information and then clarify issues surrounding the notions of analogue and digital, as

well as terms such as meta, metamedium, and multimedia. The concepts of "new" as

related to "new media" will also be discussed, including a brief discussion of avatars. The

chapter concludes with an exploration of the concepts of transmedia and metamedia.

Information

According to philosopher Luciano Floridi, we have entered the fourth

revolution—the age of the infosphere. The three previous transformative orientations

have included the Copernican revolution (centrality of humans in the universe), the

Darwinian revolution (centrality of humans in the species), and the Freudian revolution (centrality of humans in the world of rationality).[249] Gregory Bateson defined an idea or a bit of information as "a difference which makes a difference."[250] Information also can be conceptualized as analogue and digital, as discussed in the next section. But to illustrate the definitions and connections referred to in the introduction of this dissertation, it is helpful to briefly consider (interdisciplinary) remixing between Suzanne Briet's view of documents and Luciano Floridi's insights into information.[251]

Briet's conceptualization of primary and secondary documentation and my own notion of tertiary documentation (i.e., metadata) can be tied/related/connected to Floridi's notions of physical and mathematical information, as previously discussed. Briet and Floridi define either a document or information in two corresponding ways, and I add a tertiary document category to Floridi's notion of metadata:

1. Primary documents, or material artifacts; information "as" something: physical (e.g. organism and/or environment), genetic, and neural.

2. Secondary documents, or representational documentation; information "for" something: mathematical, semantic (representation), instructional, nonliving.

3. Tertiary documents, or metadocument (document of document); information "about" something: metadata (data of data[252]) as a virtual listing/category.

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[249] Luciano Floridi, *The Fourth Revolution: How the Infosphere is Reshaping Human Reality* (Oxford: Oxford University Press, 2014).

[250] Bateson, *Steps,* 315, 318.

[251] Briet, *What Is Documentation?*; Floridi, *Information.*

[252] This quote helps clarify metadata as "data that describes and gives information about other data." See metadata under "meta-, prefix," OED Online, June 2016, Oxford University Press, accessed August 28, 2016. http://www.oed.com.libproxy.uoregon.edu/view/Entry/117150?redirectedFrom=metadata.

Briet and Floridi also offer two frameworks (which again I remix) for the application and organization of documents and information:

- Documentary, or the production by selection, analysis, translation, reproduction, grouping, distribution; information in relationship to the economic and/or cultural.

- Documentology, or the cooperation and standardization of documents; information ethics, or the mode of inquiry into information.

With this framework in place, elaborating the differences and merits between analogue and digital information becomes clearer.

Analogue and Digital

To understand the distinction between analogue and digital, it is useful to think of a digital representation of an analog waveform, whereby only a certain number of points of the wave are taken into consideration and the rest are approximated or ignored. The analogue wave is energy itself, which manifests as continuous or smooth rather than discrete or striated. The digital is an approximation of nature to fit our constructed worldview. In a map-territory relationship—is the digital a map? And, is the analogue the territory? Where is the treasure? For example, a continuous embodiment would be a sundial, while a discrete representation would be the digital readout on a digital clock. An analogue medium begins with energy itself. Digital threshold pulses of energy are values that represent the analog signal. An analogue signal

differs from a digital signal, in which the continuous quantity is a representation of a sequence of discrete values which can only take on one of a finite number of

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values. The term analog signal usually refers to electrical signals; however, mechanical, pneumatic, hydraulic, human speech, and other systems may also convey or be considered analog signals. … In an electrical signal, the voltage, current, or frequency of the signal may be varied to represent the information. Any information may be conveyed by an analog signal; often such a signal is a measured response to changes in physical phenomena, such as sound, light, temperature, position, or pressure. … An analog signal has a theoretically infinite resolution. … In contrast, digital signals have a finite resolution."[253]

Matthew Fuller's "analog" entry in his book *Software Studies* engages the historical development and technical, cognitive, and ecological realities of analog systems, including computers. His descriptors for the analog include "smoothly varying," "seamless," "authentic and natural," and "feedback."[254] Similarly, Gregory Bateson and Mary Catherine Bateson in their book *Angels Fear* make a clear distinction between the analog and digital:

> A signal is "digital" if there is discontinuity between it and alternative signals from which it must be distinguished; "yes" and "no" are examples of digital signals. In contrast, when a magnitude or quantity in the signal is used to represent a continuously variable quantity in the referent, the signal is said to be "analogic."[255]

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[253] Wikipedia contributors, "Analog Signal," *Wikipedia, The Free Encyclopedia,* accessed July 27, 2016. https://en.wikipedia.org/w/index.php?title=Analog_signal&oldid=730862716.

[254] Fuller, *Software Studies*, 21, 25.

[255] Gregory Bateson and Mary Catherine Bateson, *Angels Fear: Towards an Epistemology of the Sacred*. (New York: Macmillan, 1987), 207.

To understand this differentiation, consider a vinyl record and a CD and the "analogical relationship to the thing being modeled" to an "operational amplifier ... mimic[ing]" it. Analog computers utilize electronic voltage to compute simultaneous and instantaneous embodiments of "force, flow, and circular feedback."[256] Positive and negative feedback drive thermostats, microphones-amplifiers-speakers, and music synthesizers. Each acts as an ecological "loop[s] linking organisms and their environments."[257]

Additionally, Floridi presents other distinctions, including "encoding different states" in digital systems (e.g., days of the week, heads or tails of a coin, and/or the score of a competitive sport) versus "recording" continuous "physical phenomena ... directly determined by the measurement of ... whatever solid, liquid, or gaseous material is employed" (e.g., windmill, hourglass, sundial, and/or pendulum). He continues by offering "smooth ideas," such as the intensity of pain/pleasure, waves, force fields, and the continuum of time as common daily material enactments.[258]

Since the invention of the Bush Differential Analyzer in the late 19th century, analog computers have fallen out of fashion.[259] The use of digital computation as a more precise and discrete method was held to be a more efficient and uniform use for industry and the military, although Alan Turing noted in his 1950 *Computing Machinery and Intelligence* article that "strictly speaking there are no such [digital] machines. Everything

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[256] Fuller, *Software Studies,* 21, 23.

[257] Ibid., 26.

[258] Floridi, *Information*, 25, 26.

[259] Fuller, *Software Studies,* 21.

really moves continuously."[260] Also, in Floridi's philosophical theory, there is no barrier between the analog and the digital; in fact, they serve as informational counterweights to his notion of an infosphere.[261]

A circuit of "intervening dependencies" in systems ("relations of interdependence") results from causes and effects pushing towards stability and dynamic equilibrium and away from potential saturation points. A destructive saturation is exemplified by the feedback noise of a microphone in front of a speaker, leading to the wreckage of the system itself.[262] Acknowledging this limit to systems as a metaphor for how we interact with our environment is an important lesson from the analog. Extending systems to their breaking point simply because the technological capacity exists to do so does not imply that it is environmentally sound.

Real world analog technologies emerge from the complex, dynamical, and chaotic discoveries of the "syncretistic sciences of cybernetics and systems theory."[263] Exemplar applications by ecologists include the visualization of "energy, matter, and information flowing through ecological, economic, and industrial systems."[264]

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[260] Alan M. Turing, "Computing Machinery and Intelligence," *Mind: A Quarterly Review of Psychology and Philosophy* (January 1, 1950): 236, 433; Floridi, *Information*, 25-26.

[261] Luciano Floridi, "Floridi: Infosphere - Responsibilities of Informational Agents." Uploaded by DeepChange, *Vimeo*. https://vimeo.com/27334076.

[262] Fuller, *Software Studies,* 24.

[263] Ibid., 25.

[264] Ibid., 26.

Hybridization/Hybrids

Fabricating analog computers in a hybridized digital medium offers opportunities for programming[265] as well as the possibilities of growing neural networks, artificial cochleas, and artificial retinas. For example, University of Oregon and University of Canterbury–New Zealand material physicist Richard Taylor is working on such a technology to assist people with retinal damage. His hypothesis is that "nanoflower ... formation[s] ... that resemble a person's nerves on their retina" can be grown artificially and integrated with microchips. This development would utilize an "array of detectors that are able to capture light that comes into the eye and generate electrical signals that are then sent to a person's brain."[266]

In acknowledging the cross-modal framing and implementation of analog-digital systems, Fuller notes that it is time "to reevaluate our concepts of what 'computation' is, or might in time become."[267] Likewise, by bringing the vision of Floridi's nondualistic concept of the infosphere to life in appropriating legacy analog technologies with and for our current digital instruments, a hybrid fusion may emerge to heal ourselves and our world. Responding to our current era, Floridi coined the term "inforgs" or information cyborgs to deal with this issue.[268] Meanwhile, Fuller sidesteps the transformative ethics surrounding this mode of hybridization. Indeed, other questions remain as well: How do we define computation going forward? And how do we recognize flows and energies in an ecology that will become ever more important as time moves on? But to briefly

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[265] Ibid., 28

[266] Darin Moriki, "University Professor's Research Offers Hope for Vision-impaired," *Daily Emerald*, May 25, 2011. http://www.dailyemerald.com/2011/05/25/nanoflowers-offer-hope-for-vision-impaired.

[267] Fuller, *Software Studies,* 28.

[268] Luciano Floridi, *Philosophy and Computing: An Introduction* (London: Routledge, 1999).

summarize this section, it is important to note that distinctions, intersections, and commonalities exist between analogue and digital forms in all areas of inquiry.

Meta-

This section will consider the prefix "meta-" and will culminate with the conjunction "metamedium," which will lead to in-depth discussion of other emerging media. Attempting to confine and contain the tidal wave of literal, central, and complex metaphoric possibilities that are available to "metamedia" (as discussed later in this chapter) may be nearly impossible. However, providing a grounding for corralling them is the motivation for this section.

The origin of the prefix "meta" comes from the Greek "with" and "in the midst of, among and between."[269] Oxford Dictionaries defines "meta-" as

1. Denoting a change of position or condition: metamorphosis

2. Denoting position behind, after, or beyond: metacarpus

3. Denoting something of a higher or second-order kind: metalanguage[270]

The basic level *radial category* for "meta-" includes the central member as the frame of "transcending, encompassing,"[271] as well as epistemologically, "about (its own

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[269] Henry George Liddell and Robert Scott, "μετά," in *A Greek-English Lexicon*, Revised and augmented throughout by Sir Henry Stuart Jones with the assistance of Roderick McKenzie (Oxford: Clarendon Press, 1940). http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.04.0057%3Aentry%3Dmeta%2.

[270] "meta-," Oxford Dictionaries. Oxford University Press, accessed August 28, 2016. http://www.oxforddictionaries.com/definition/english/meta-.

[271] Wiktionary contributors, "meta-," *Wiktionary, The Free Dictionary,* accessed July 27. 2016. https://en.wiktionary.org/w/index.php?title=meta-&oldid=39167351.

category)."[272] Noncentral member examples include "after, behind," "among, between," and/or "besides, over and above"[273] and/or "adjacent,"[274] as well as notative examples in literature, such as meta-narratives. Some extensions of the prefix itself include: Metaphysics, a "general investigation … into the nature of reality" and "to uncover what is ultimately real."[275]

Another permutation is meta-theory[276] (e.g., systemics or systems science), which belongs to the specialty of epistemological inquiry that concerns itself with another theory, or a theory of theories, that consider "properties such as foundation, form, method, and utility."[277] A noteworthy internationally recognized member category is mêtta, pertaining to the awareness and/or "meditation of care, concern, tenderness, loving kindness, friendship—a feeling of warmth for oneself and others."[278]

Metamedium

Transitioning from the radial category analysis of "meta" and "medium," we can visualize network topologies of each of the terms, as well as the blend, "metamedium."

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[272] Wikipedia contributors, "Meta," *Wikipedia, The Free Encyclopedia,* accessed July 27, 2016. https://en.wikipedia.org/w/index.php?title=Meta&oldid=716831274.

[273] "μετά," *A Greek-English Lexicon*.

[274] Wikipedia contributors, "Meta."

[275] Edward Craig, "Metaphysics," *Routledge Encyclopedia of Philosophy*, 1998, accessed July 27, 2016. https://www.rep.routledge.com/articles/metaphysics/v-1.

[276] See Robert T. Craig, "Metatheory," *Encyclopedia of Communication Theory*, Vol. 2, eds. Stephen W. Littlejohn and Karen A. Foss (Thousand Oaks, CA: SAGE Publications, 2009), 658-661.

[277] Wikipedia contributors, "Meta."

[278] Steven Smith, "Loving-Kindness Meditation," The Center for Contemplative Mind in Society, n.d. http://www.contemplativemind.org/practices/tree/loving-kindness.

However, we must continue to analyze the conceptual metaphor and the interdependence connecting these terms.

To effectively exemplify the converging, developing, and emerging radial category for the conjunction "meta-medium" requires considering "meta" and "medium" together as conceptual arrays of a *double-scope blend.*[279] This convergence zone integrates these two inputs, whose frame structures conflict in radical ways on the vital conceptual relation of *role-value*. Metamedium's frame structure draws selectively from the inputs and dynamically develops an emergent structure not found in either.

A metamedium is a medium of a medium. It would be considered a second-order system, a representation of patterns of information, "external symbolic storage" system,"[280] in essence a metasystem (a system of a system) for material culture. One early example of a metamedium is Alan Kay's Dynabook, which was described as

- an interactive memory or file cabinet. The owner's context can be entered through a keyboard and active editor, retained and modified indefinitely, and displayed on demand in a font of publishing quality

- content would be a wide range of already-existing and not-yet-invented media

- it can respond to queries and experiments—so that the messages may involve the learner in a two-way conversation.[281]

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[279] Gilles Fauconnier and Mark Turner, "The Origin of Language as a Product of the Evolution of Double-scope Blending," *Behavioral and Brain Sciences* 31, 5 (October 13, 2008): 520-521.

[280] Merlin Donald, *Origins of the Modern Mind: Three Stages in the Evolution of Culture and Cognition* (Cambridge, MA: Harvard University Press, 1991), 269-360.

[281] Kay and Goldberg, "Personal Dynamic Media."

Multimedia

The next form of media that requires definition is multimedia. Multimedia can be seen as old media, it can be seen as new media, and it can be seen as old and new media together. Using a combination of more than one representation of a pattern of information, multimedia puts together parts of other mediums in a significant way. Additionally, a haptic interface (e.g., mouse or other human–computer interaction device)[282] could also be seen as a form of multimedia, where the external symbolic storage acts as an interface for the human user.

Continuing with an additive synthesis, multimedia is defined traditionally by the OED as follows:

A. Using more than one medium of communication, artistic expression, etc.; (*Computing*) designating or relating to applications which incorporate a number of media, such as text, audio, video, and animation, esp. interactively.

B. 1. As a count noun: a work of art, production, show, etc., which employs a variety of artistic or communicative media.

2. The use of a variety of artistic or communicative media; (*Computing*) the incorporation of a number of media, such as text, audio, video, and animation, esp. interactively.[283]

As such, if a metamedium can be thought of as a current day laptop computer, which can coalesce representations of multiple forms of mediums (including sound, light, and color) as *multimedia* (audio, video, interactivity), then it follows that archiving and

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[282] "Haptic Technology," *Wikipedia, The Free Encyclopedia,* June 9, 2016), accessed July 4, 2016. https://en.wikipedia.org/w/index.php?title=Haptic_technology&oldid=724407989.

[283] "multimedia, adj. and n.," OED Online, June 2016. Oxford University Press, accessed September 28, 2015. http://www.oed.com.libproxy.uoregon.edu/view/Entry/123564.

visually representing information on a screen or monitor in pixels (2-D)[284] and voxels (3-D)[285] is the next logical step. These recognizable patterns of information interface with haptic human–computer interactive systems (control, keyboard, mouse, sensor) and human–environment ecological interactions as communication (verbal/nonverbal language, mass communication) creating hybrid avatars profiled within virtual environments and enacted usually in one's living room ecology.

One form of multimedia utilized by computers is hypertext. Oxford Dictionaries defines hypertext as "a software system allowing extensive cross-referencing between related sections of text and associated graphic material."[286] Vannevar Bush in 1945 proposed the incubation of an uncannily similar concept, Memex, in the *Atlantic* article "As We May Think." The instrument would leave traces as records of "associative trails" and "if properly developed, [would] give man access to and command over the inherited knowledge of the ages." He feeds forward "a new profession of trail blazers, those who find delight in the task of establishing useful trails through the enormous mass of the common record."[287] In this way, a contemporary external symbolic storage system would be a computer and hypertext running on said computer.

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[284] "Pixel," *Wikipedia, The Free Encyclopedia*, July 1, 2016, accessed July 4, 2016. https://en.wikipedia.org/w/index.php?title=Pixel&oldid=727837351.

[285] "Voxel," *Wikipedia, The Free Encyclopedia,* June 20, 2016, accessed July 4, 2016. https://en.wikipedia.org/w/index.php?title=Voxel&oldid=726231097.

[286] "hypertext," Oxford Dictionaries, Oxford University Press, accessed August 3, 2016. http://www.oxforddictionaries.com/definition/english/hypertext.

[287] Vannevar Bush, "As We May Think," *Atlantic*, 176, no. 1 (1945).

In 1974, artist Nam June Paik coined the term "information superhighway" for a study conducted on behalf of the Rockefeller Foundation.[288] His manifesto[289] foreshadowed the "everywhere-available world of broadcasting via the World Wide Web [WWW]."[290] Today, computers continue to communicate over the internet in what is commonly understood as the information space of the WWW, invented by Sir Tim Berners Lee. Lee also was the first to realize communication between a client and server with the hypertext transfer protocol: http.[291] Similarly to the expansion of interactive multimedia, OED defines hypermedia as "a method of structuring information in different media for presentation to a single user, usu[ally] through a computing workstation, whereby related items of information are connected in the same way as in hypertext."[292] Oxford Dictionaries defines hypermedia as "an extension to hypertext providing multimedia facilities, such as those handling sound and video."[293]

Finally, multimedia can be seen as a complex system (Figure 7), understood as an autopoietic (self-making) organism[294] and/or an allopoietic machine[295] (e.g., an assembly line or an artificial intelligent agent).

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[288] "Nam June Paik - I'm a Communication Artist."
https://web.archive.org/web/20080310220829/http://netart.incubadora.fapesp.br/portal/midias/paik.htm.

[289] Nam June Paik, "Utopian Laser TV Station," in *Manifestos* (New York: A Great Bear Pamphlet, 1966), 26. http://artype.de/Sammlung/pdf/manifestos.pdf.

[290] Chandler and Neumark, *At a Distance…*, 415.

[291] "Tim Berners-Lee," World Wide Web Consortium (W3C). https://www.w3.org/People/Berners-Lee.

[292] "hypermedia, n.," OED Online. June 2016. Oxford University Press, accessed August 7, 2016.
http://www.oed.com.libproxy.uoregon.edu/view/Entry/243460.

[293] "hypermedia," Oxford Dictionaries, Oxford University Press, accessed August 7, 2016.
http://www.oxforddictionaries.com/definition/english/hypermedia.

[294] Francisco Varela and Klaus Krippendorff, "Autopoiesis," in Francis Heylighen, *Web Dictionary of Cybernetics and Systems. Principia Cybernetica*, n.d. http://pespmc1.vub.ac.be/asc/AUTOPOIESIS.html.

Interactive multimedia is experiential and sensory, you don't simply observe the object, you are the object. You enter into and become part of the landscape, not just a detached observer. The medium functions as an extension of the self, a reconfiguration of identity, dreams, and memories—blurring the boundary between self and exterior. … Pierre Lévy describes virtualization as "that which has potential rather than actual existence. The virtual tends toward actualization."[296]
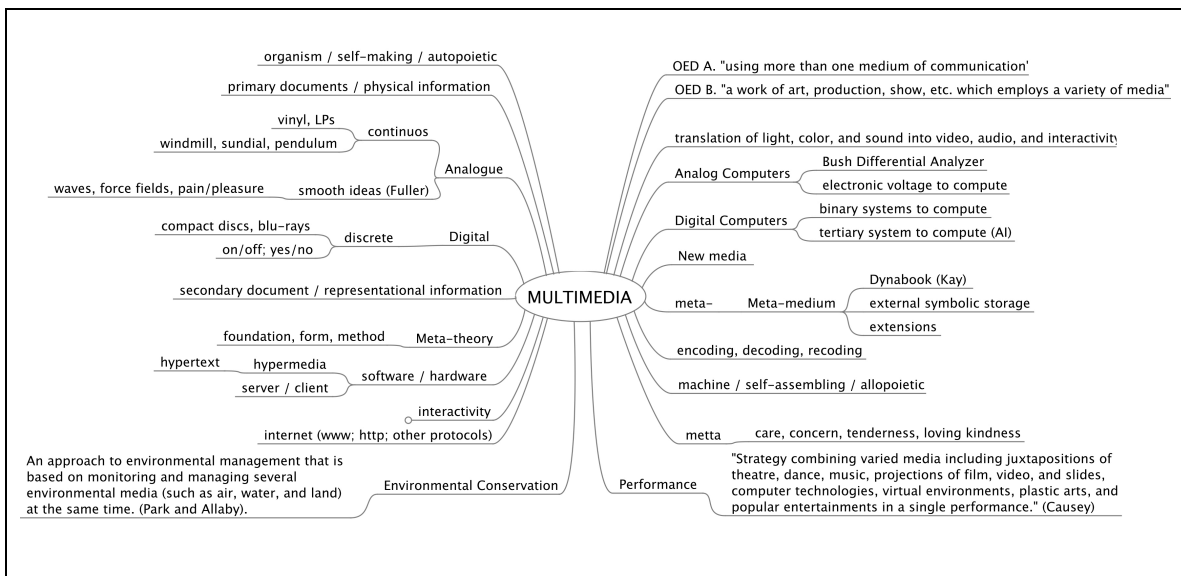
Figure 7. An illustration of a radial category analysis of the term *multimedia*.

"New"

The next frame, new media, requires us to elaborate on the notion of "new." It draws on known and unknown cartographies within the parameters of spatial and

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[295] "Allopoiesis," in Francis Heylighen, *Web Dictionary of Cybernetics and Systems. Principia Cybernetica,* n.d. http://pespmc1.vub.ac.be/asc/allopoiesis.html.

[296] "Becoming Virtual <ø>," http://www.w2vr.com/timeline/Future.html. Also see Randall Packer, "Just What Is Multimedia, Anyway?" *MultiMedia, IEEE* 6, no. 1 (1999): 11-13; Randall Packer and Ken Jordan, eds., *Multimedia: From Wagner to Virtual Reality*, Expanded Edition (New York: W. W. Norton & Co., 2002).

temporal domains for creative possibilities. Within this dynamic territory, which includes mathematical and scientific inquiries, opportunities exist for affordance and experimentation. As a conceptual framework, "new" stands as a qualifier within symbolic language and semantic systems of human thought and experience.

Engendered by disciplinary approaches, this multifaceted concept situates imaginative, novel circumstances for the previously unrecognizable to come to fruition. "New" differentiates shared commonalities of legacy ("old"), traditional systems of meaning and comprehension, by repurposing and remixing assumptions and discriminations of formalized materials, methods, and practices. "New" attempts to coop, augment, and extend by reinterpreting previous constraints and limitations of theory and praxis as a "practical social activity."[297]

In each defining age of transformative enactments, from stone to bronze, iron to print, or steam to electricity, "newness" is always "a socially constructed process" and "summons us to consider the historical dimension of all communication."[298] Historical turnings necessitated moving beyond previous constraints of form/function and material/meaning. This turn corkscrews into a spiral creating dynamic magnetic forces of attention, attraction, repulsion, and entropy, such as Claude Shannon's uncertainty and Norbert Wiener's disorder.

"New," in terms of contextual frameworks of the self, the social, and cultural evolution, supposedly invites surprise and mystery to established patterns, anticipations,

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[297] "praxis, n.," OED Online, June 2016, Oxford University Press, accessed June 21, 2016. http://www.oed.com.libproxy.uoregon.edu/view/Entry/149425.

[298] David W. Park, Nick Jankowski, and Steve Jones, "Introduction" in *The Long History of New Media: Technology, Historiography, and Contextualizing Newness*. Digital Formations; v. 76 (New York: Peter Lang, 2011). http://thelonghistoryofnewmedia.net/toc/introduction-history-and-new-media.

and expectations. If so, what is "self" if redefined as new? Postmodernism interrogates prevailing assumptions of identity by offering theoretical and epistemological interfaces, skating the horizons of creative identities (e.g., avatars, elaborated later in this section).

What is "social" if redefined as new? Remixed tendencies and societal relationships (structures and institutions) are reconfigured with complex emerging trends informing meaning, behavior, and practice resulting in as-yet undefined adaptations.

What is cultural evolution if redefined as new? In practical terms, it renames and/or reappropriates a given cultural habit/habitat, product/service, and/or communicatory processes as applied context to emerging, updating, and/or novel events and "ensembles and patterns" of contemporary experience and possibility.

McLuhan in his day danced around media, discovering unimagined landscapes and the creation of previously unexperienced objects, to attempt to forge emergent mental and emotional states of being. Newness, reflexively, again attempts to officiate the continuum of self–society–culture as community. "New" enacts an ethos, telos, and taxonomy of unending processes and unlimited horizons; it invests in each generation the gift of the future—past as present. In my view, openness as an emergent cultural competency and adaptation can promote broad-scale accessibility, pragmatic democratic values, and imaginative/creative endeavors.

New Media

Now, imagine an interstitial (middle) state, but this time as a discourse of flexibility around new media, a paradox. Media is new media art, and new media art is media. New media endeavors to point to societal changes via virtual communities that

include avatars, persons, projects, and more, whose themes cross over critiques of globalization to everything from agile computing methodologies (e.g., nonproprietary or open source software) and improvisational theatre to virtual environments and MMOs (massive multi-player online games).[299]

Now throw into the pot mobile computing media platforms (e.g., iPhone and Android) that exhibit self-organizing and attractor state tendencies called smart mobs. Smart mobs are self-structuring social organizations, enabled by technology and exhibiting novel emergent behaviors in the world (similar to their counterparts, e.g., critical mass bicycling events), in which "net smarts" can be applied.[300]

Broadcast media that were developed for single, one-way direction communication (single contingency and double contingency) are transposed to the multi-directionality and feedback of/for administrators, users, and other digitally identifiable role-sets (triple contingency). While institutions have gained big data quality of narrowcasting to their viewers, individuals now seemingly have access to unlimited content (on natural user interfaces[301]).

Other multimodal approaches are also present in Lev Manovich's new media, whose underlying principles are 1) numerical representation (objects existing as data), 2) modularity (different elements existing independently), 3) automation (created and

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[299] Jeremy N. Bailenson and Kathryn Y. Segovia, "Virtual Doppelgangers: Psychological Effects of Avatars Who Ignore Their Owners," in *Online Worlds: Convergence of the Real and the Virtual*, ed. William Sims Bainbridge (London: Springer, 2010), 176.

[300] Howard Rheingold, *Smart Mobs: The Next Social Revolution* (Cambridge, MA: Basic Books, 2003); Howard Rheingold, *Net Smart: How to Thrive Online* (Cambridge, MA: MIT Press, 2012); Howard Rheingold, "Stewards of Digital Literacies," *Knowledge Quest* 41, no. 1 (2012): 52-55.

[301] Wikipedia contributors, "Natural User Interface," Wikipedia, The Free Encyclopedia, accessed August 1, 2016. https://en.wikipedia.org/w/index.php?title=Natural_user_interface&oldid=722913364.

modified automatically), 4) variability (existing in multiple versions), and 5) transcoding (conversion into another format).[302]

New media is "media we do not know how to talk about." It is "digital media," "old media," "media that become new again," and "networked communication systems" that "combine both analog and digital elements."[303] Marvin extends social ecologies whereby new media "are not fixed natural objects" and "they have no natural edges." Williams and Newton offer an integrative account of new media, observing that

> the idea of formats in new media often focuses on such new technologies as digital imaging, the Internet, and wireless transmission. If we want to understand visual communication, however, new media must be inclusive. MRIs, dolls, fashion, surgery, global positioning systems, DNA, and the human body all are part of the new media field.[304]

It is important to remember, as Hansen extolls, "life is ultimately creative, unrecordable, and always in excess of what can be inscribed and made available for repetition."[305] Alfred Korzybski and subsequently Gregory Bateson illuminated this point early on by saying that the "map is not the territory."[306] In other words, the representation of an artifact or environment is not the artifact or environment itself. From Heisenberg to

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[302] Lev Manovich, "Principles of New Media," in *The Language of New Media*. Leonardo (Series) (Cambridge, MA: MIT Press, 2002), 49-65.

[303] Park, *The Long History of New Media.*

[304] Williams and Newton, *Visual Communication,* 375.

[305] Mark B. N. Hansen, *New Philosophy for New Media* (Cambridge, MA: MIT Press, 2006), xxvi.

[306] Alfred Korzybski, *Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics* (Lakeville, CN: International Non-Aristotelian Library Pub. Co.; distributed by Institute of General Semantics, 1933/1958), 58; Bateson, *Steps,* 455.

Gödel to Turing, each questioned observational certainty with the uncertainty principle[307]—even the "territory," in many cases, is not the territory.[308]

Metaverse

To elaborate these new media mapping environments, I performed a double scope blend of "meta-" and "universe" that generated the emergent term "metaverse." OED defines metaverse as

> *Science Fiction and Computing*. A computer-generated environment within which
> users can interact with one another and their surroundings, a virtual world; (more
> generally) the notional environment in which users of networked computers
> interact; = cyberspace."[309]

Additionally and more recently, it is understood as a virtual-reality space.[310]

The virtual cave, or territory that is not the territory, of the fourth dimension in virtual worlds and reality exists as a velum between a work and a viewer. "In that space, the viewer's awareness and bodily experiences can be restructured and recreated. In describing immersive forms, 'we cannot,' according to Margaret Morse, 'fully anticipate what it means to experience that realm until we are inside.' "[311] McLuhan stated this

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[307] Cristian S. Calude and Michael A. Stay, "From Heisenberg to Gödel via Chaitin," *International Journal of Theoretical Physics* 46, 8 (2007): 2013-2025.

[308] Park, *The Long History of New Media.*

[309] "metaverse, n.," OED Online, June 2016, Oxford University Press, accessed March 28, 2015. http://www.oed.com.libproxy.uoregon.edu/view/Entry/271922.

[310] "metaverse," Oxford Dictionaries, Oxford University Press, accessed March 28, 2015. http://www.oxforddictionaries.com/definition/english/metaverse.

[311] Packer and Jordan, *Multimedia*; "Becoming Virtual <ø>"; "conFIGURING the CAVE," Jeffrey Shaw, Leslie Stuck, Agnes Hegedus, and Bernd Lintermann, 1997. http://www.ntticc.or.jp/en/archive/works/configuring-the-cave.

similarly when he said, "It's like the fish in the water. We don't know who discovered water, but we know it wasn't a fish. A pervasive medium, a pervasive environment, is always beyond perception."[312]

Avatars

This section explicates the concept of avatars in the metaverse and constructs a comprehensive overview for academic, professional, and layperson audiences alike. New disciplinary bridges are being built between social scientists and computer scientists in the arena of immersive virtual environments, beginning with social media and extending to virtual reality. From virtual reality's early days at the University of California–Santa Barbara, researchers employed virtuality to create artificial environments unable to be reproduced in typical real-world analogue situations. The intention for this experimental procedure was to create a control space whereby participants would be more likely to emote genuine responses within a controlled environment. Complex factors in natural environments would tend to elicit "interference from other [social] cues,"[313] in turn interfering with the studies.

A virtual human is a 3-D digital representation controlled by a user, which can exhibit human personality and ranges of motion, in other words an avatar. Advanced characteristics can be applied to the avatar with gesture, face, and body tracking systems, whereby embodied actions are mirrored in the virtual environment.

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[312] McLuhan stated this in an interview. See Laurie Anderson, Kevin McMahon, David Sobelman, Gerry Flahive, Michael McMahon, and Kristina McLaughlin, *McLuhan's Wake* (New York: Disinformation Co., 2006), 49:15-49:22

[313] Ahn, Fox, and Bailenson, "Avatars," 2012.

An agent is a computer algorithm programmed to respond and interact with virtual environments predetermined by a set of coding criteria. A confederate is an agent subset "who perform[s] similarly scripted behaviors every time a subject is run in a study."[314]

Mirror Worlds

Smart, Cascio, and Paffendorf, in their *Metaverse Roadmap* overview, explicate the trend towards "mirror worlds," where sensors, modeling, and immersion cooperate in an indistinguishable whole.[315] Since the distinction between an "avatar" and an "agent" is a function of control over a digital representation, the intended purpose takes on a certain degree of social and cognitive importance.

With presence and copresence as issues, concerns emerge surrounding emotions, feelings, and proxemics. Whether gaming, medical, or military use, arenas where agents perform more effectively are multidimensional and complex in educative scenarios in which outcomes are standardized.

Where is it appropriate to employ these agents, and where will human avatars be most effective? In balancing the benefits and the potential abuses for researchers, "computational model[s] of emotion dynamics" and "computation[al] model[s] of morality" are no longer metaphysical abstract dialogues. Agents can serve as "guides, mentors, and teammates" but still lack the capacity "to perceive and react to human emotions and behaviors." With robotic extensions to human experience being employed

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[314] Ibid.

[315] John Smart, Jamais Cascio, and Jerry Paffendorf, *Metaverse Roadmap: Pathways to the 3D Web: A Cross-Industry Public Foresight Project* (n.d.), Acceleration Studies Foundation.

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in crisis management, scenarios may include superfund sites and natural and man-made disasters, which are unremediable without (some form of) avataristic deployment. In other words, we as a species cannot fix the problems we create with technology/media without technology/media.

But what are the means and ends-in-view for the use of virtual humans? Can the uncanny valley (a "break in presence"[316]), the uncomfortable space between human-like avatars and cartoon-like avatars, bridge the need for deeper humanistic self-reflection? To this extent, we are becoming our avatars and our avatars are becoming us; the blending of identities in real and virtual worlds is a critical avenue for inquiry. Is this true with social media? Is this future–present evolving into another phase? Ahn, Fox, and Bailenson conclude that "the user's imagination is the only limit to how the story unfolds."[317] However, I disagree that the user's imagination must come to terms with the limits of the systems and standardizations by which the imagination is cartographized. Remember, the notion of a computer, a metamedium, as a machine, as an environment, as a worldview, may now be in question. But, who wants to ask it?

In the final analysis of this section on avatars in the metaverse, what is the (borrowing from Felix Guattari) ethicoaesthetic paradigm[318] we envision for ourselves, our families, and our "friends"? This is regarding whether or not we confide our lives on social media or play video games in front of sensor-based systems (note the upcoming section on metamedia). As a community, are there boundaries between the natural and

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[316] Mel Slater and Anthony Steed, "A Virtual Presence Counter," *Presence-Teleoperators and Virtual Environments* 9 (2000): 413–34.

[317] Ibid.

[318] Felix Guattari, *Chaosmosis: An Ethico-aesthetic Paradigm* (Bloomington, IN: Indiana University Press, 1995).

artificial worlds? Where do they collide? In other words, if the map is not the territory, again, is the territory even the territory? Or, as one scholar noted at the 50th Anniversary Conference of the International Society for the Systems Sciences,[319] maybe, just maybe, "the map is the treasure—for it will enable us to find our way around the labyrinth of language."[320]

Trans-

The prefix "trans-" is defined by OED as "across, through, over, to or on the other side of, beyond, outside of, from one place, person, thing, or state to another."[321]

Transmedia

The double scope blend of "trans" and "media" evokes a media beyond and/or across any one given platform (as multiplatform). The term transmedia,[322] also known as cross-media, has been discussed by Henry Jenkins in two ways: storytelling[323] and navigation. Transmedia storytelling is an example of the buttressing of media, multimedia, and intermedia into the framing of a metanarrative for entertainment products and services.

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[319] International Society for the Systems Sciences (ISSS), "Sonoma 2006: The 50th Annual Meeting of the International Society for the Systems Sciences," http://isss.org/world/conferences/sonoma2006.

[320] Peter Hacker, *Wittgenstein: Understanding and Meaning. Analytical Commentary on the Philosophical Investigations, Volume 1, Part I: Essays* (Malden, MA: Wiley, 2005), 275. This citation is a different quotation and a somewhat different context than the one from ISSS, but still may be of interest.

[321] "trans-, prefix," OED Online, June 2016, Oxford University Press, accessed August 2, 2016. http://www.oed.com.libproxy.uoregon.edu/view/Entry/204575.

[322] Julie Stratton, "Transmedia Resources: Overview," January 30, 2015. https://sites.google.com/site/transmediaresources.

[323] Henry Jenkins, "Transmedia Storytelling," *MIT Technology Review,* January 15, 2003. https://www.technologyreview.com/s/401760/transmedia-storytelling.

By using different media, it attempts to create "entrypoints" through which consumers can become immersed in a story franchise's world. The aim of this immersion is decentralized authorship, or transmedial play.[324]

Transmedial play is a term used by Stephen E. Dinehart, a producer, designer, writer, and artist.[325] Recent examples include the films *Avatar*, *Lord of the Rings*, and *Star Wars*, which utilize this buttressing of various media together to form a transmediated space. Scholars who have invoked the term transmedia include Carlos Scolari,[326] Henry Jenkins,[327] and others.[328]

Transmedia spaces are created by producers, directors, pro-amateurs, and producer-consumers, who utilize emergent practices in new media technologies. Examples might include a video game, film, comic, mobile device app, toys, music, an Internet site, and experiential interaction (even regarding environmental concerns[329]) in which none of the actual storylines are in any one medium (and are designed to increase audience engagement beyond the film, e.g., participatory cultures of Comic-Con, or

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[324] Wikipedia contributors, "Transmedia Storytelling," *Wikipedia, The Free Encyclopedia*. accessed August 28, 2016. https://en.wikipedia.org/w/index.php?title=Transmedia_storytelling&oldid=200365358.

[325] Steven E. Dinehart, "Transmedial Play: Cognitive and Cross-platform Narrative," Narrative Design Exploratorium, accessed December 10, 2008. https://web.archive.org/web/20090218002949/http://narrativedesign.org/2008/05/transmedial-play-the-aim-of-na.html.

[326] Carlos Scolari, "Transmedia Storytelling: Implicit Consumers, Narrative Worlds, and Branding in Contemporary Media Production," *International Journal Of Communication 3*, 21 (2009).

[327] Henry Jenkins, "Transmedia Storytelling 101," *Confessions of an Aca-Fan; the Official Weblog of Henry Jenkins*, 2007. http://henryjenkins.org/2007/03/transmedia_storytelling_101.html.

[328] "Dan Epstein reports from The Futures of Entertainment Conference at MIT," *The Varsity: The University of Toronto's Student Newspaper Since 1880*, January 20, 2010. https://web.archive.org/web/20100327135357/http://thevarsity.ca/articles/24855.

[329] Marsha Johnston, "Avatar Home Tree Initiative Plants Over 1 Million!" January 20, 2011. https://web.archive.org/web/20160101235851/http://www.earthday.org/blog/billion-acts-green/2011/01/20/avatar-home-tree-initiative-plants-over-1-million.

theme parks and rides). These spaces in one way or another corroborate a decentralized metanarrative with multiplexed perspectives and media that enacts a hybrid environment for further production, consumption, and engagement.

Transmedia Navigation

Jenkins also considers transmedia as a form of navigation. These forms are typically applied to entertainment through social media, but civic media, smart media, and other convergent media are at the crossroads of physical and virtual space integration. In this way, media act as an immersive, persuasive, and pervasive holding tank (like McLuhan's notion of the environment for a fish).

By buttressing together a variety of media (including multimedia of audio, video, and hypermedia, along with other forms of media discussed throughout this dissertation), people are producing and consuming the environments they inhabit. And in this cyclical pattern of navigating through the Internet, scholars are pointing to media studies and media literacy as important components of transmedia navigation.

Transmedia Storytelling

I extend these notions of transmedia to archival methods emerging that can be understood as curatorial, including open access archives for scholarly journals, scholarly reports, and other important documentation.

There are two prominent factors driving the growth of transmedia storytelling. The first is the proliferation of new media forms like video games, the internet, and mobile platforms and the demand for content in each. The second is an

economic incentive for media creators to lower production costs by sharing assets.

Transmedia storytelling often uses the principle of hypersociability. Transmedia

storytelling is also sometimes referred to as multi modality.[330]

Additionally, with the emergence of more complex systems of transactions (via

decentralized currencies and banking, virtual museums, etc.), there are ways to

collaborate and cooperate to solve important problems and issues that may not have been

readily available only a decade ago that transmedia can potentially facilitate.

Metamedia

Again, it may seem like I am attempting to affix meanings of these terms to find

universal definitions, but again, nothing could be further from the reality of the situation.

Whether we train our gaze on a focal item or pull back to an ecological scene, there are

still greater superimpositions that may have been or are present and that may have

disintermediated us.

The polysemousness of medium and media, meta, and metamedium are semantic

and inferential evidence for revisiting our frameworks of aesthetics, economics,

education, politics, and other dimensions of meaning. Due to the sheer complexity as

single terms in their own right, we can consider them as a multiple scope blend.

These blended mappings bring shared cultural meanings to Marshall McLuhan's

version of metamedia, whereby Marchessault states that "all media are created through

interfaces, all media have for their content older media."[331] Additionally, Klaus Bruhn

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[330] Wikipedia contributors, "Transmedia Storytelling," *Wikipedia, The Free Encyclopedia*, accessed March 13, 2016. https://en.wikipedia.org/w/index.php?title=Transmedia_storytelling&oldid=200365358.

[331] Janine Marchessault, *Marshall McLuhan: Cosmic Media* (London: SAGE Publications, 2005), 183.

Jensen has his own conceptualization of metamedia as bodies, tools, technologies, and metatechnologies.[332] By viewing metamedia under the lens of source and target domains,[333] media becomes the structured source domain with meta facilitating the directional trajectory (projection) towards understanding the more abstract and less structured target domain, metamedia. Metamedia is then an emergent blending (process) and concept.

This coactivation of the conceptual metaphor was intentionally designed to be synergetic (interdisciplinarily), expanding the awareness and possibilities of emerging and exciting materials, experiences, and phenomena. In cases where a definition of the term had been presupposed and/or imposed in a limited sense, please see the sections below "Metamedia as Intergrationist Aesthetics" and "Metamedia as Academic Inquiry" for institutional research examples. If categories are containers, then every category is an instance of another kind, which then implies metamedia as a category of categories.

Mental Space

The mental space[334] of metamedia connects and facilitates emerging conceptualized metaphors by aiding in the integration of dichotomous relationships, including that between the visual (sight-vision) and auditory (sound-acoustic). It is a

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[332] Klaus Bruhn Jensen, "Meta-media and Meta-communication: Revisiting the Concept of Genre in the Digital Media Environment," *MedieKultur: Journal of Media and Communication Research* 27, no. 51 (2011): 14; Klaus Bruhn Jensen, "How to Do Things with Data: Meta-data, Meta-media, and Meta-communication," *First Monday* 18, no. 10 (2013).

[333] Lakoff, *Women, Fire…,* 288.

[334] Gilles Fauconnier, *Mental Spaces: Aspects of Meaning Construction in Natural Language,* 2nd ed. (Cambridge: Cambridge University Press, 1985); Eve Sweetser and Gilles Fauconnier, "Cognitive Links and Domains: Basic Aspects of Mental Space Theory," in *Spaces, Worlds, and Grammar*, eds. Gilles Fauconnier and Eve Sweetser (Chicago: University of Chicago Press, 1996).

mental space whereby undiscovered maps, territories, and treasures can be uncovered.

Metamedia can be perceived as a palette, whereby media of all forms and structures are

paints, clays, and enactions (mediums) for critical inquiry via the digital humanities.[335]

This theory-practice intersects computing and the disciplines of the humanities to engage

reflection on how "media affect the disciplines in which they are used, and what … these

disciplines contribute to knowledge of computation."[336] Metamedia blends and

synthesizes a variety of digital presentational formats that utilize connectionist

metamediums (such as this networked, computer-created document and the faculty

committee enjoined to review it), adding value to a commons of peer collaborators in

cooperation modeled as a second-order system.

To quote Klaus Krippendorff, "interfaces follow recognizable meanings."[337] He

recruits (using Fauconnier and Turner's term) our goal as designers to instead achieve

"human-centered" design aesthetics. The conceptual blend of human centeredness is

distinguished from technology centeredness by emphasizing the meaning stakeholders

attribute to artifacts. Continuing that "second order understanding," or an understanding

of each stakeholder's understanding of artifacts, is necessary to designing artifacts

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[335] See "The Short Guide" by Anne Burdick, Johanna Drucker, Peter Lunenfeld, Todd Presner, Jeffrey Schnapp, *Digital_Humanities* (Cambridge, MA: MIT Press, 2012), 121–136.

[336] "The Digital Studies Community: What is Digital Humanities?" Camden, NJ: Digital Studies Center, Rutgers, The State University of New Jersey, 2014-2016. ("It seems appropriate here to turn to the contemporary and often controversial information source: Wikipedia. The Digital Humanities community has put much effort into creating and updating Wikipedia as a valuable resource. Many of the DH community have contributed to Wikipedia's working definition of Digital Humanities"); Wikipedia circa June 2010: https://digitalstudies.camden.rutgers.edu/the-digital-studies-community; Wikipedia contributors, "Digital Humanities," *Wikipedia, The Free Encyclopedia*, accessed August 28, 2016. https://en.wikipedia.org/w/index.php?title=Digital_humanities&oldid=369014150.

[337] Klaus Krippendorff, *The Semantic Turn: A New Foundation for Design* (Boca Raton, FL: CRC/Taylor & Francis, 2006), 299.

successfully.[338] Since meanings of others cannot be observed directly, designers need to carefully observe actions that imply certain meanings, involve themselves in the dialog with stakeholders, and invite these stakeholders to participate in the design process themselves. This looping back together of the corporeality of our (embodied, embedded, enacted, and extended) experience and the environment in which we exist (e.g., digital document design in the creation of this dissertation) can serve as ecological meanings[339] that acknowledge the interconnectedness of "cultural, social, technological, economic,"[340] and environmental life. By recognizing the frailty and robust resilience of our world, we must be forever mindful of the limits to natural systems.

Metamedia as Integrationist Aesthetics: A New Tetrad of Media Effects

> "Feedback" relying on experience is now too slow. We must know in
> advance of action. The "feedforward" of knowledge based on pattern
> recognition of process is essential for reprogramming beyond ideologies.
> What had always appeared inevitable can thus be bypassed.
>
> —Marshall McLuhan[341]

Immersive communications environments include real, virtual, and hybrid situations and contexts. Past analogue and digital environments include everything from command-line interface and keyboards to human–computer interaction with a mouse and

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[338] Ibid., 61-70.

[339] Ibid., xiv.

[340] Ibid., 271.

[341] Marshall McLuhan, "Postures and Impostures of Managers Past," in *Essential McLuhan*, eds. Eric McLuhan and Frank Zingrone (New York: Basic Books, 1995), 77.

graphical user interface. Contemporary environments involve virtual worlds and natural user interfaces (touch screens and sensor-based cameras) to wikis and participatory culture. A moment now exists for in-depth reconsideration of the intersection of the body, technology, and communication, in other words, inquiry into what ways humans and society are transformed through such technological advances between the medium itself and the media's content in relationship to these environments.

Conceptual frameworks emerge from the multiple scope blend of metamedia, taking into account all previous notions in this dissertation, and should include reference to analogue, digital, virtual, physical, and their emergent media: virtual embodiment and embodied virtuality. Their associated human concerns engage analogue and digital conceptualizations, substantiations, and enactments to critically analyze through the lenses of material, conceptual, and cultural containers how embedded information communication technologies are embodied, enacted, and remixed in postpostmodern or pragmatist life. I envision four different dimensions of metamedia (an integrative framework for emergent media) (see Table 3).

I.   Analogue: continuous, physical/material, corporeal

     (e.g., pendulum, hourglass, sundial, and windmill)

II. Digital: discrete, representational, computational

     (e.g., algorithm, code, program, information technology operating system)

III. Virtual Embodiment: translation of physical medium into digital information

     (e.g., 3-D depth-sensors/motion-capture cameras; environmental data

     visualization)

IV. Embodied Virtuality: translation of digital information into a physical medium

(e.g., 3-D printing in various mediums, including plastics and metals; drones).

Virtual Embodiment/Virtual Intercorporeality

Just as our prehistoric ancestors painted their own reflections and/or projections on the walls of Lascaux, history comes now full circle, or as T. S. Elliott wrote in *Four Quartets*, "my end is my beginning." The walls may begin to paint us. Now this is interesting especially because most notably artificial intelligence critic and philosopher Hubert Dreyfus mentions virtual intercorporeality as a viable means of moving forward in hands-free, emotional facial, gestural, and expressive capabilities for 3-D navigation of systems. He points to 3-D cameras able to mimic these gestures on one's face specifically, so the feelings and emotions that a person is expressing will then be mimicked by the avatar itself,[342] which I feel is one of the great losses of human communicative fidelity in our digital age. Currently, companies are in the midst of prototyping emergent media[343] for "mirror worlds," as previously discussed in this chapter.[344]

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[342] Hubert Dreyfus, "Virtual Embodiment and Myths of Meaning in Second Life."

[343] A sensor-based camera system example: "The PrimeSensor™ Technology," August 18, 2011, accessed via archive.org. https://web.archive.org/web/20110818152343/http://www.primesense.com/?p=487. Virtual reality examples include High Fidelity, Inc., founded by Second Life founder Philip Rosedale, https://highfidelity.io; Joe Durbin, "An Interview With Veeso: The World's First Face Tracking HMD," UploadVR.com. Accessed on July 25, 2016. https://uploadvr.com/interview-veeso2.

[344] Smart, et al., *Metaverse Roadmap*.

Table 3. Dimensions of metamedia.

Physical →	**III. Virtual Embodiment**	→ Representational
I. Analogue	**Metamedia**	**II. Digital**
Material ←	**IV. Embodied Virtuality**	← Virtual

Source: Dreyfus, 2008; Swartz, 2010[345]

Embodied Virtuality: Metapatterns

Gregory Bateson encourages us to consider that "the pattern which connects is a metapattern. It is a pattern of patterns. It is that metapattern which defines the vast generalization that, indeed, it is patterns which connect"[346] (see also[347]).

3-D Printing (aka Additive Manufacturing)

This manufacturing process is dedicated to bringing objects that were once in a digital and virtual environment into the physical world. Some films and websites that elaborate on the process include *Print the Legend*,[348] *Will 3D Printing Change the*

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[345] Hubert Dreyfus, "Virtual Embodiment…"; Jeremy D. Swartz, "Metamedia."

[346] Gregory Bateson, *Mind and Nature: A Necessary Unity* (New York: Dutton, 1979).

[347] Tyler Volk, *Metapatterns Across Space, Time, and Mind* (New York: Columbia University Press, 1995).

[348] Luis Lopez, J. Clay Tweel, Chad Troutwine, Steven Klein, Seth Gordon, Dan O'Meara, Bre Pettis, Kyle Johnston, and Matthew McGaughey, *Print the Legend.* Netflix (Warren, NJ: Passion River, 2014).

World?[349] and the *White House 3D-Printed Ornament Challenge*.[350] The range of

materials that can be utilized is growing every day, from nylon plastics to various metals

(already in commercial production through firms like Shapeways[351]), custom industrial

printing (Strata Systems[352]), and emerging techniques in bioprinting.[353] The options seem

to be limited only to the imagination.

Artificial Intelligence, Robotics, and Drones

   Artificial agents are beginning to enact decision-making processes autonomously,

with and without human oversight. Some brief examples include buying and selling

(trading) on stock markets, home loan risk analysis, distributed actions in gaming, swarm

actions, and extended systems in robotics for how to apply affordances to the

environment (i.e., one incubator has been the Defense Advanced Research Projects

Agency along with business enterprises such as Boston Dynamics). Autonomous

artificial agents have been discussed,[354] and much information on the development of

cognitive science and artificial intelligence is available.[355]

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[349] Kornhaber Brown (Producer), "Will 3D Printing Change the World?" *Off Book | PBS Digital Studios*, March 1, 2013. http://www.pbs.org/video/2339671486/.

[350] Stephanie Santoso and Ryan Xue, "Announcing the Winners of the First-Ever White House 3D Printed Ornament Challenge," *White House* website, December 3, 2014. https://www.whitehouse.gov/blog/2014/12/03/announcing-winners-first-ever-white-house-3d-printed-ornament-challenge; Smithsonian X 3D, "White House 3D-Printed Ornament Challenge," *Smithsonian X 3D*. http://3d.si.edu/white-house-3d-printed-ornament-challenge.

[351] "About Us," Shapeways, Inc., New York, New York. http://www.shapeways.com/about?li=footer.

[352] "Custom 3D Printing Services," Stratasys Direct, Inc., Valencia, California, 2016. https://www.stratasysdirect.com/promos/3d-printing-services-b.html.

[353] Sean V. Murphy and Anthony Atala, "3D Bioprinting of Tissues and Organs," *Nature Biotechnology*. 32 (8) (2014): 773-85; Anthony Atala and James J. Yoo, *Essentials of 3D Biofabrication and Translation* (Amsterdam: Elsevier/Academic Press, 2015).

[354] See Samir Chopra and Laurence F. White, *A Legal Theory for Autonomous Artificial Agents* (Ann

Connecting Virtual Embodiment and Embodied Virtuality

Recently, the President of the United States had his presidential portrait taken by a newly developed digital photographic process that combined a "mobile light stage" with "hand-held scanners" to reconstruct and render a 3-D digital model. Then, his 1:1 presidential bust was created from the data of this technique (virtual embodiment) and sent to a 3-D printer (utilizing embodied virtuality techniques).

> The portrait and bust of the President were "created by a Smithsonian-led team of 3D-digital-imaging specialists, Autodesk and 3D Systems, in collaboration with the University of Southern California's Institute for Creative Technologies. It took two different technologically sophisticated 3D documentation processes to generate the data needed to create this portrait."[356]

Metamedia: Life as Art

The media of media becomes a metadisciplinary approach, at the very least a cultural tool (potentially a speculative instrument) that can point to evolutionary potentialities for material culture and its models. How can "meta-," not as above and/or beyond (vertical), be returned to it original definition *with* (lateral) and be placed into dialogue with hybridized transdisciplinary environments as media? This question echoes

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Arbor, MI: University of Michigan Press, 2011); "Autonomous Agent," in *Wikipedia, The Free Encyclopedia*, June 10, 2016, accessed July 14, 2016. https://en.wikipedia.org/w/index.php?title=Autonomous_agent&oldid=724611833.

[355] Lakoff and Johnson, *Philosophy in the Flesh,* 74-93, 235-266.

[356] "New Video Provides a Behind-the-Scenes Look at the First 3D-Printed Presidential Portraits," *White House.* https://www.whitehouse.gov/blog/2014/12/02/new-video-provides-behind-scenes-look-first-3d-printed-presidential-portraits; "Smithsonian Creates the First-ever 3D Presidential Portrait," http://dpo.si.edu/blog/smithsonian-creates-first-ever-3d-presidential-portrait.

some of the sentiments regarding metadisciplinarity by scholars such as Craig,[357] Ranulph Glanville and Mary Catherine Bateson,[358] Stuart Umpleby,[359] and others.[360] Is this communication as a metadiscipline?

Returning very briefly to the World's Fairs, it is interesting to see that the 1967 Montreal, Canada Fair began utilizing the label of "Expo" instead of World's Fair. This label subsequently was adopted by other events (with the exception of the 1982 and 1984 Fairs). Beginning with Expo 2000 in Hanover, Germany ("Humankind, Nature, Technology"), the themes of all subsequent World's Fairs have focused on sustainability and issues related to the natural environment and human flourishing.

My focus for this section is on elements noted at Expo 2005 in Aichi, Japan, whose theme was "Nature's Wisdom."[361] It featured cross-cultural dialogue, sustainability related resources, arborsculpture and arbortecture as forms of bio-art/bio-media, and ASIMO the robot.

Again, it is important to note that even greater extensions to the concept of technology and media, especially metamedia, have taken form as biology (life) or

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[357] Craig, "Communication Theory as a Field," 155. See quote: "Communication as a metaperspective—a perspective on perspectives may help us to appreciate the irony of our situation."

[358] Philip, Ranulph Glanville, David Griffiths, and Ben Sweeting, "Living in Cybernetics: Papers from the 50th Anniversary Conference of the American Society for Cybernetics," *Kybernetes* 44 (8-9) (2015).

[359] Stuart Umpleby, "Overview," The American Society for Cybernetics. http://www.asc-cybernetics.org/foundations/cyberneticians.htm. (Also see "Definitions of Cybernetics," George Washington University, https://www.gwu.edu/~asc/cyber_definition.html.)

[360] Andruid Kerne, "Doing Interface Ecology: The Practice of Metadisciplinary," in *ACM SIGGRAPH 2005 Electronic Art and Animation Catalog*, ACM (2005): 181-185; Peter Osborne, "Problematizing Disciplinarity, Transdisciplinary Problematics," *Theory, Culture & Society*, 32 (5-6) (2015): 3-35.

[361] Japan Association for the 2005 World Exposition, "Why 'Nature's Wisdom'? Overcoming a Dual Challenge: Japan's Experience." EXPO 2005 AICHI JAPAN was supported by IBM Japan, Ltd. http://www.expo2005.or.jp/en/whatexpo/message_01.html.

biotechnology,[362] as noted by Sandra Braman, who engages the concept of meta-technology (e.g., recombinant DNA).[363] Ironically, Robert H. Carlson categorically states "Biology is the *oldest* technology" [364] [emphasis in the original].

In addition to metatechnologies, biomedia, biomimicry, and biomedicine, all of the above techniques are utilized in the creation of mediums in the biological sciences. This also includes the transcription of biological information into bioinformatics as well as the generation and printing of stem cells onto theorized human organs for regenerative medicine.[365] In the case of bio-art, "bio-artists bridge the gap between arts, sciences."[366]

What if the medium of the human genome (in essence our bioarchitecture) or an everyday apple remained in the hands of a few entities censured to an exclusive way of life? If we were unable to access the very information of our embodied selves because of these restrictions, how would we (as embodied metaphors and embodied actors) innovate ourselves?

Biologist and former Celera Genomics president Craig Venter and his Institute for Genomic Research program on hybrid intellectual property licensing have been provocative. He had the gestalt of open sourcing, or making freely and practically

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[362] John Hartley, "Biotechnology," *Communication, Cultural and Media Studies: The Key Concepts,* 4th ed., Routledge Key Guides (Abingdon, UK, and New York: Routledge, 2011), 31-32.

[363] Braman, "The Meta-Technologies of Information," 5.

[364] Carlson, *Biology is Technology*, 1.

[365] National Institute of Biomedical Imaging and Bioengineering (NIBIB), "Tissue Engineering and Regenerative Medicine," U.S. Department of Health & Human Services, National Institutes of Health (NIH). https://www.nibib.nih.gov/science-education/science-topics/tissue-engineering-and-regenerative-medicine.

[366] Jessica M. Pasko, "Bioartists Bridge the Gap Between Arts, Sciences," *NBC News*, March 4, 2007. http://www.nbcnews.com/id/17387568/ns/technology_and_science-science/t/bio-artists-bridge-gap-between-arts-sciences.

accessible, the source, his own genetic data. Now, future generations' journeys and trials may be less encumbered because of his foresight.

Consider if our personalized genomics[367] became open sourced. What are the ethical and privacy concerns that must be addressed? In this arena of bioinformatics, the Bush administration enacted the Genetic Information Nondiscrimination Act of 2008,[368] which prohibits health plans and insurers from denying coverage or charging higher premiums based solely on a genetic predisposition and bars employers from using said genetic medium to discriminate when making decisions on hiring, firing, placing, or promoting individuals. Therefore, our metaphors are tied intimately to our embodiment and to the pervasive aesthetic characteristics of our human experience itself[369] (which will be covered in Chapter V).

Additionally, I would like to note that with the emergence of more complex systems of interactions and transactions come emerging forms of metamedia not limited to metamaterials[370] and spaces of meaning where art and science are integrated as a medium, for example, the nano-bio-info-cogno convergence[371] and vertical farming.[372]

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[367] Personal Genome Project: Harvard Medical School, http://www.personalgenomes.org ["The Personal Genome Project was founded in 2005 and is dedicated to creating public genome, health, and trait data. Sharing data is critical to scientific progress, but has been hampered by traditional research practices—our approach is to invite willing participants to publicly share their personal data for the greater good."]

[368] "The Genetic Information Nondiscrimination Act of 2008," U.S. Equal Employment Opportunity Commission (EEOC), May 21, 2008. https://www.eeoc.gov/laws/statutes/gina.cfm.

[369] Roger Highfield, "What's Wrong With Craig Venter?" *New Republic,* February 2, 2016. https://newrepublic.com/article/128977/whats-wrong-craig-venter.

[370] Rakhesh S. Kshetrimayum, "A Brief Intro to Metamaterials," *IEEE Potentials* 23 (5) (2004): 44-48.

[371] Mihail C. Roco and William Sims Bainbridge, *Converging Technologies for Improving Human Performance: Nanotechnology, Biotechnology, Information Technology and Cognitive Science.* (Dordrecht: Kluwer Academic Publishers, 2003.) (The caption below a figure featured in the book, "Changing the societal 'fabric' towards a new structure," reads: "The integration and synergy of the four technologies (nano-bio-info-cogno) originate from the nanoscale, where the building blocks of matter are established. This picture symbolizes the confluence of technologies that now offers the promise of improving human

By conjoining meta and media, a platform is provided to view metamedia as a palette for an analytical, holistic, and integrated category of life as a relational ethicoaesthetics, transmitting-connecting-cooperating like conduits bouncing along the network one sphere to another. As McLuhan points out:

> Computers offer the potential of instantaneous translation of any code or language into any other code or language. If data feedback is possible through the computer, why not feed-forward of thought whereby a world consciousness links into a world computer? Via the computer, we could logically proceed from translating languages to bypassing them entirely in favor of an integral cosmic unconsciousness somewhat similar to the collective unconscious envisioned by Bergson. The computer thus holds the promise of a technologically engendered state of universal understanding and unity, a state of absorption in the logos that could knit mankind into one family and create a perpetuity of collective harmony and peace. This is the real use of the computer, not to expedite marketing or solve technical problems but to speed the process of discovery and orchestrate terrestrial—and eventually galactic—environments and energies.[373]

lives in many ways, and the realignment of traditional disciplinary boundaries that will be needed to realize this potential. New and more direct pathways towards human goals are envisioned in working habits, in economic activity, and in the humanities."); See also Hartley, "Biotechnology," 31-32; Jay David Bolter, "Posthumanism," in *The International Encylopedia of Communication Theory and Philosophy*, ed. Klaus Bruhn Jensen (Malden, MA: Wiley Blackwell and the International Communication Association, 2016), 1-8.

[372] The Open Agriculture Initiative (OpenAg), MIT. http://openag.media.mit.edu.

[373] Marshall McLuhan, "Interview: Marshall McLuhan," *Playboy*, March 1969, 26–27, 45, 55-56, 61, 63.

Metamedia as Academic Inquiry

Metamedia has been an emergent phenomena in the academy for over two decades. It can be conceptualized as a metadisciplinary integration/remix of the frames that have been supported at various universities. These academic substantiations of metamedia from the Massachusetts Institute of Technology (MIT), the University of California–San Diego (UCSD), Stanford, and Harvard are enacted as literal metaphors of an interdisciplinary online laboratory and/or as recursive categories or transdisciplinary critique, as collaboratory or metalaboratory for strategic action. Additionally, I posit a metacollaboratory as a philosophical mode of inquiry akin to Dewey's "criticism of criticism"[374] or the

> applications of intelligence in a multitude of fields to a vast diversity of problems so that science and technology may be rendered servants of the democratic hope and faith. … In this achievement science, education, and the democratic cause meet as one. … If a solution is found it will be through the medium of human desire, human understanding, and human endeavor.[375]

What happens when a metadisciplinary mode of engagement enacts a metacommons of situated ideals? Here are some interesting instantiations:

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[374] Dewey, *Experience and Nature*, 298.

[375] John Dewey, "The Democratic Faith and Education," in Vol. 15 of *The Later Works, 1925-1953*. Electronic Edition (Charlottesville, VA: InteLex, 1944), 260. [Originally published in *Antioch Review* 4 (June 1944): 274-83, from an address, read by Jerome Nathanson, before the conference on The Scientific Spirit and Democratic Faith, at the Ethical Culture School, New York City, May 27, 1944.]

- MIT: Metamedia at MIT is understood in an actual transmedia sense, as "a flexible online environment to create, annotate and share media-rich documents for the teaching and learning of core humanistic subjects."[376]

- UCSD: Meanwhile, Lev Manovich (while at UCSD) conceived of metamedia as a form of cultural remix. His notion of metamedia is

  the remixing of previous cultural forms of a given media (most visible in music, architecture, design, and fashion), and a second type of remixing—that of national cultural traditions now submerged into the medium of globalization (the terms "postmodernism" and "globalization" can be used as aliases for these two remix paradigms). Meta-media then can be thought alongside these two types of remixing as a third type: the remixing of interfaces of various cultural forms and of new software techniques—in short, the remix of culture and computers. ... For instance, one of the most culturally important examples of meta-media which everybody is familiar with today is hypertext.[377]

- Stanford University: Additionally, Michael Shanks (Stanford University) has emphasized metamedia in the past as "a short circuit between the academy, the art studio and information science exploring media and their archaeological materiality."[378] The current site states, "Metamedia is a studio and lab that pursues

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[376] "Metamedia: Transforming Humanities Education at MIT, " MIT, accessed June 10, 2008. http://metaphor.mit.edu:8080/mmedia-web.

[377] Lev Manovich, "Understanding Meta-Media," *CTheory*, October, 26, 2005. http://www.ctheory.net/articles.aspx?id=493.

[378] This description is no longer available online. See Wikipedia contributors, "Metamedia," *Wikipedia, The Free Encyclopedia*, accessed December 3, 2015. https://en.wikipedia.org/w/index.php?title=Metamedia&oldid=734178523.

research and pedagogy in design history and media materialities."[379] The previous

definition of metamedia stated that it was a "creative studio and laboratory space

for experimenting and taking risks."[380] It still reads, "a democratic and

collaborative assembly of archaeologists, anthropologists, classicists,

communications experts, new media practitioners, performance artists,

sociologists, software engineers, technoscientists, and anyone else who wants to

join."[381]

- Harvard University: Finally, one outgrowth of the Stanford Humanities Lab

  (which colocated Stanford metamedia as well) was its previous director, Jeffrey

  Schnapp, who is now at Harvard University. He has recently enlisted a

  transdisciplinary crew of cocreators to form the metaLAB at Harvard. It is "an

  idea foundry, knowledge-design lab, and production studio dedicated to

  innovation and experimentation in the networked arts and humanities."[382] I was

  fortunate to attend one of their first major events, openLAB 2014[383] billed as

      a series of events engaged in curatorial experimentation and innovation to

      provide a forum to share everything from recent hacks and projects in

      progress to ad-hoc spectacles and polished productions. openLAB participants

      include core metaLAB members and other artists, scholars and technologists

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[379] "Mission," Metamedia at Stanford, Stanford University,
http://humanitieslab.stanford.edu/Metamedia/463.

[380] This description also is not currently online. See Wikipedia, "Metamedia."

[381] "Mission," Metamedia at Stanford, Stanford University.

[382] "About," metaLAB @ Harvard, Harvard University, http://metalab.harvard.edu. (Project hosted by the Berkman Klein Center for Internet and Society.)

[383] metaLAB(at)Harvard, *openLab 2014*, Vimeo, https://vimeo.com/93215472.

engaged in exploring new modes of practice, exhibition and knowledge

design. The events migrate from site to site, ranging from local galleries to

public spaces to Harvard arts venues.[384]

- University of Oregon: Metamedia at the University of Oregon[385] can be

conceptualized as a metacollaboratory. It currently is comprised of three parts:

1. An investigation into the conceptual framing and ontologies of

   communication, medium, and media (see Chapters II and IV).

2. Curated experiences, environments, and collaborations including *What

   is Media?,* especially *HABITATS*, as discussed in Chapter VI.

3. Courses including "Ecologies of Media," "Civic Media," and "A

   Philosophy of Communication, Media, and Information."

It has been valuable to the Eugene and Portland, Oregon, community by

facilitating open sharing, art–science–publics, and University–community

collaborations and cooperation.

Metamedia as Music

Metamedia are integrationist media as environments (see Figure 8). Metamedia

are metapatterns. Metamedia can be understood as modes of inquiry into the transciptive,

translative, and transformational encoding-decoding in media and communication

ongoing in physical-to-virtual and virtual-to-physical processes. Metamedia are not a way

to ornate objective truth but to illuminate life towards an ends-in-view of awareness of

how open-ended and nonlinear our world really is. In this way, metamedia can be

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[384] "About," metaLAB @ Harvard, Harvard University, http://metalab.harvard.edu.

[385] Metamedia at the University of Oregon, homepage, http://metamedia.uoregon.edu.

understood as an embodied metaphor, as Buchannan suggests a concept bridging not as much between, across, or beyond but most especially *with* the integration of rhythms, melodies, symphonies, harmonies, compositions, refrains, and escapes (e.g., tonally, metrically, and thematically) as music itself.[386] This music is conducted through inter-, trans-, and metadisciplinary inquiries connecting an amazing number of departments everywhere.

> Seemingly you move away from culture and technology and become a world-denying mystic. But in reality—in a spiral—you are coming back into the heart of the post-technological culture.
>
> —William Irwin Thompson[387]
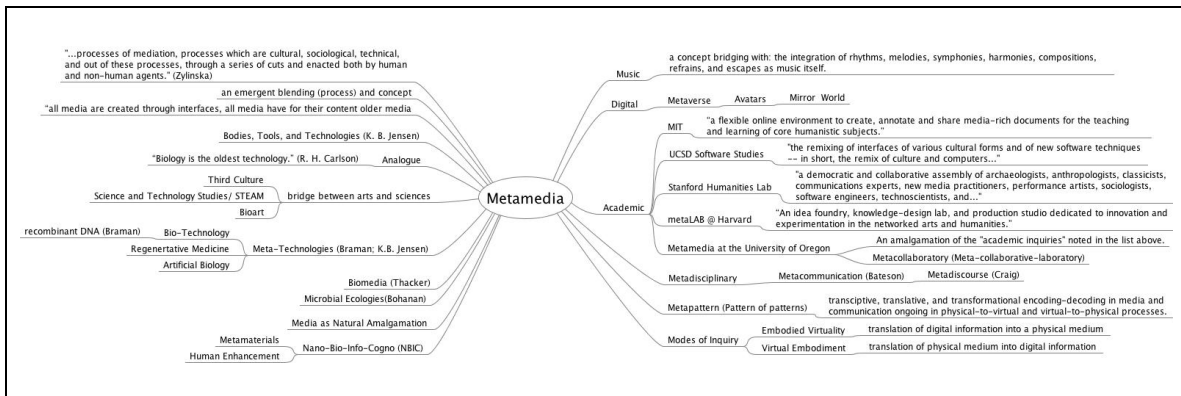
Figure 8. An illustration of a radial category analysis of the term *metamedia*.

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[386] Brett Buchanan, *Onto-ethologies*.

[387] "Time Interview: The Mechanists and the Mystics," *Time Magazine*, August 21, 1972.

CHAPTER V

COMMUNICATION, PRAGMATISM, AND AESTHETICS

Overview

After conceptualizing notions of media, emergent media, and exemplary applications of curation, this chapter elaborates communication and aesthetics along a Pragmatist line. It is an orientation to medium/media that embraces an embodied aesthetics and embodied ethics framework and helps us to rethink these notions in light of changing materials, concepts, and practices. What follows is an account of experience/culture, multidisciplinarity, problem solving, and how meaning is enacted.

This chapter is a response to Robert T. Craig's call for an aesthetic tradition[388] and François Cooren's call for a conceptual framing of embodiment.[389] An argument is made for embodied aesthetics as a candidate for grounded practical theory and, as such, a way forward for communication theory-practice. This is viewed through the lens of John Dewey's concept of "experience," where body, mind, and environment enact in an integrated whole with context-based values and ethics.

As such, this chapter considers how constitutive praxis builds a case for why Dewey's experience, embodiment, methodological pluralism, and meliorism is embodied in, of, and for aesthetics. An embodied approach is added to Chris Russill's pragmatism[390] by cultivating aesthetics as integrative inquiry and communicative praxis. Communication is where theory informs praxis, and praxis is embodied in theory.

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[388] Craig, "Communication Theory as a Field," 151; Robert T. Craig, "The Constitutive Metamodel: A 16-Year Review," *Communication Theory* 25, 4 (2015): 356-374; Craig and Muller, *Theorizing Communication,* 88.

[389] Cooren, "Pragmatism…," 1-26; Cooren, "Communication Theory…."

[390] Russill, "Toward a Pragmatist Theory…."

To arrive at an embodied experiential framework or aesthetics, we first need to discuss definitions of basic concepts such as communication and pragmatism. We also must consider grounded practical theory, which then can be expanded by notions of embodiment and experience to become embodied grounded practical theory. After a brief discussion of methodological pluralism and meliorism, it is then possible to present an embodied aesthetics that can contribute to the field of communication theory and research.

Communication

Dewey states, "Of all affairs, communication is the most wonderful."[391] More recently, in the *Encyclopedia of Rhetoric,* Craig defines communication generally as a first-order linear "transmission or exchange of ideas … meanings, packaged in symbolic messages"[392] as a model of communication. Communication can be categorized at "a first-order level at which we assert our own political or intellectual point of view, and a metalevel [lateral] at which we assert norms to govern processes of participation and inquiry."[393] As discussed in Chapter IV, "meta" in this context, is not so much the OED notion of "after," "beyond," or "above" (transcending),[394] but instead "with" including

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[391] Dewey, *Experience and Nature*, 132; John Dewey and Joseph Ratner, *Intelligence in the Modern World: John Dewey's Philosophy* (New York: Modern Library, 1939).

[392] Craig, "Communication," 125-137. See also Bruce Clarke, "Communication," in *Critical Terms for Media Studies,* eds. W. J. T Mitchell and M. B. N. Hansen (Chicago: University of Chicago Press, 2010), 132.

[393] Craig, "Pragmatism in the Field…," 23.

[394] "meta-," Oxford Dictionaries, Oxford University Press, accessed August 1, 2015. http://www.oxforddictionaries.com/definition/english/meta- .

"along with" (in common, in conjunction)[395] and my conceptual framing of lateral,

adjacent, or concomitant ("including").

Communication can be understood as single contingency, "a linear (A → B) model in

which A contingently selects a message to influence B."[396] This frame stated by Craig

was posited by Carey as the transmission model of communication,[397] which in many

ways builds its foundations on the work of Norbert Wiener's first-order cybernetics,[398] or

what Hayles posits as the first wave of cybernetics.[399] Communication can also be

understood as double contingency, "an interactionist (A ↔ B) model in which A's and

B's incommensurable perspectives jointly determine the message."[400] Within this frame

Maturana and Varela's autopoietic and reflexive systems can be understood under the

auspices of second-order cybernetics, or what Hayles describes as the second wave of

cybernetics.[401] Dewey in *Experience and Nature* states that "the fruit of communication

should be participation, sharing ... [whereby] all natural events are subject to

reconsideration and revision; they are re-adapted to meet the requirements of"[402] the

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[395] "μετά," *A Greek-English Lexicon*.

[396] Craig, "Pragmatism in the Field…," 132

[397] Carey, *Communication as Culture.*

[398] Wiener, *Cybernetics.*

[399] N. Katherine Hayles, "Cybernetics," in *Critical Terms for Media Studies*. See also N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999).

[400] Ibid., 132.

[401] Hayles, "Cybernetics…."

[402] Dewey, *Experience and Nature*, 132.

interaction, transaction, or situation where "events turn into objects, things with a meaning ... [and] when once they are named lead an independent and double life."[403]

More recently communication has been conceptualized by Russill[404] and Strydom[405] as triple contingency, a "perspective that forms the context in which A and B must interact." This perspective is represented by society, "a pluralistic public comprising incommensurable group interests ... and is contingent on their reflexive awareness of the actions and interests of various nonpresent others who constitute the public."[406] Triple contingency is inclusive of a transmission model to ritual view following Carey but also opens recognition of an interactive constitutive view following Craig. It does so by resituating theory/research/inquiry into a historical, cultural, public, and intellectual context that requires relationships between theory and practice. Communication is thus reciprocal and mutually reflexive, actualizing a pragmatic method and subsequently moves towards Dewey's conceptualization of publics and method. Dewey states that there are

> three plateaus. ... The first ... [is] external interactions ... physical ... distinctive
> properties ... of mathematical-mechanical system[s] discovered by physics and
> which define matter as a general character. The second level is that of life.
> Qualitative difference, like those of plant and animal ... qualities in common
> which define the psycho-physical. The third plateau is that of association,
> communication, participation ... marked throughout its diversities ... by common

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[403] Ibid., 132.

[404] Russill, "Toward a Pragmatist Theory…."

[405] Piet Strydom, "Triple Contingency: The Theoretical Problem of the Public in Communication Societies," *Philosophy & Social Criticism* 25, 2, (1999): 1-25.

[406] Craig, "Pragmatism in the Field…," 132.

properties, which define mind as intellect; possession of and response to meanings.[407]

By acknowledging this modeling of communication as an "accuracy of information and causal impact of messaging,"[408] a description of phenomena and meaning making can emerge as second-order reflexivity.[409] Carey suggests that we reformulate our idea of communication beyond reflection to action.[410] Embodiment is "a material or actual thing or person in which an abstract principle, concept, etc., is realized or concretely expressed."[411] In this regard, the "embodied understanding" of "linguistic significance"[412] opens up new possibilities for Carey's notion of "associative life" as a participative process. While this implies a positive value, the downside is the problematic. Languages are disappearing daily, and no global language exists; distortions come with time and mass media and are commonly known as information gaps[413] and cultural drift. On an even more personal level, as "in relations among friends, colleagues, and loved ones, what might be called failure to communicate is more often a divergence of commitment or a deficit of patience."[414]

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[407] Dewey, *Experience and Nature*, 208.

[408] Craig, "Pragmatism in the Field…," 128.

[409] Craig, "Communication Theory as a Field," 119-161.

[410] Carey, *Communication as Culture,* 63-64.

[411] Angus Stevenson, *Shorter Oxford English Dictionary* (New York: Oxford University Press, 2007), 816.

[412] Lakoff and Johnson, *Philosophy in the Flesh.*

[413] Carey, *Communication as Culture*, 63, 64.

[414] Peters, *Speaking into the Air,* 269.

Relative to communication, in *Experience and Nature*, Dewey writes that language is "the tool of tools"[415] (what I describe as a metatool), and "The heart of language is ... communication; the establishment of cooperation in any activity in which there are partners, and in which the activity of each is modified and regulated by partnership."[416] He also states, as noted above, "Of all *affairs*, communication is the most wonderful."[417] [emphasis added].

James Carey echoes Dewey's sentiments by turning our attention away from things and instead points to communication as ritual, "a symbolic process whereby reality is produced, maintained, repaired, and transformed."[418] Craig reflects on Carey's assertion in his book *Communication as Culture,* stating, "Carey understands the constitutive [formal component] property of communication in terms of ritual. ... Carey's metaphor of ritual emphasizes the cultural aspect of communication ... [whereby] we ideally constitute a common world by participating in the rituals of a shared culture." According to Craig, Stanley Deetz's negotiative and political process echoes Carey, as both construct critical reflexivities informing practices of communication. "In Carey's words, every model *of* communication is also a model *for* communication."[419]

With whom are we in communication (communicatively)? Cooren observes:

it is not enough to notice that this world is shaped and transformed by

communication technologies and new forms of communication habits and usages;

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[415] Dewey, *Experience and Nature*, 134, 146, 181.

[416] Ibid., 141.

[417] Ibid., 132.

[418] Carey, *Communication as Culture*, 19.

[419] Craig, "Pragmatism in the Field…," 128. ("An earlier version of this article was presented to the Annual Conference of the International Communication Association, Dresden, Germany, June 2006.")

... we also need to provide a communication model of this world, one which

would mark the original contribution our field has to offer to the scientific

community at large, to communication professionals or even to non-specialists. ...

Some key scholars like Carey (1989), Deetz (1994), Fairhurst (2007),

Krippendorff (1994), Putnam (1983) and Taylor (1993) of our field have paved

the way—three of them past ICA presidents and all of them ICA fellows ... have

all called, directly or indirectly, for a constitutive view of communication. They

have all worked, each in their own ways, on what it could mean to think about the

world communicatively.[420]

To summarize, the five main points regarding an initial integrative account of

communication include 1) a conceptualization of the social, 2) contingencies affect the

social, 3) information affects the material, 4) pragmatist problem-solving tool of tools,

and 5) the changes to social/material/cultural order or recognizing our world as

constructive, ritualistic, and autopoietic. This leads us to Pragmatism via enactments of

the tool of tools (e.g., language) to solve problems in, of, and for the world/society.

It is interesting to consider Craig's seven communication traditions of

communication theory, which originally included rhetoric, semiotics, phenomenology,

cybernetics, social psychology, sociocultural theory, and critical theory—a *constitutive*

metamodel of communication.[421] Russill makes a case for pragmatism as an eighth

tradition for the constitutive metamodel and goes as far as to suggest that the metamodel

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[420] Cooren, "Communication Theory…," 12.

[421] Craig, "Metadiscourse…."; Craig, "The Constitutive Metamodel…."; Craig and Muller, *Theorizing Communication*, 88.

itself is a pragmatist project.[422] Craig interpretively restates Russill's hypothesis: "Is

pragmatism one tradition in the field or is it a metatradition that defines the entire field?

Can it be both?"[423] He answers explicitly by stating, "The constitutive metamodel now

must openly admit that it is a largely pragmatist project rather closely aligned with a first-

order pragmatist theory of communication, although it also includes and welcomes

dialogue with other incommensurable approaches."[424]

Pragmatism

Pragmatism has traditionally tended to be conceptualized in communication

theory as constructivist, pragmatic, and scientistic. One contribution of Robert T. Craig

and Chris Russill to communication as a discipline is to see and comprehend a much

richer account than that, which incorporates an innate interdisciplinary pragmatist quality

that should be embraced across the academy and into all modes of everyday life. The

overall intention here is to interpenetrate communicative discourse with these and other

related concepts. As Peters (1999) wrote: "The middle ground of pragmatic making do"

is where "the body is not a vehicle to be cast off, it is in part the homeland to which we

are traveling."[425] Merely focusing on "making do" assumes we know the ends to a given

situation. A good pragmatist realizes not merely pregiven ends, not merely getting by.

But as we will see, the curatorial is not just means-ends but is the reconstruction of ends-

in-view. Pragmatism does not reduce these processes to mere efficiency or effectiveness

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[422] Russill, "Toward a Pragmatist Theory...."

[423] Craig and Muller, *Theorizing Communication*, 500.

[424] Craig, "Pragmatism in the Field…," 141. Also see Craig and Muller, *Theorizing Communication*; Craig, "Reflection…," 7-11; Craig, "The Constitutive Metamodel," 356-374.

[425] Peters, *Speaking into the Air,* 65.

but instead is about making the situation better and recognizing processes that were latent but yet to be realized. This is not about a new order or only how new possibilities come in play but about a joint exploration of possible meanings and harmonizing ends-in-view. It is originally through Dewey that communication establishes the working conditions for thinking through the interdisciplinary problematic situation, going beyond "making do" and moving toward transforming experience for the better.

A practical discipline is where "the moral and technical aspects of communication are combined within a process of critical inquiry that involves reflective, dialectical movement between theory and practice." By historically situating and cultivating "communication as both (a) a morally and politically significant social practice [or praxis] and (b) a skilled productive [and technical] activity [or *technê*],"[426] a pragmatic reflective discipline of theory and practice can be understood and can accomplish the task of laying the groundwork for emergent communication traditions/models/statistical ecologies (think cartographies and plateaus).

Russill[427] follows Carey and responds to Craig, stating that the constitutive metamodel of communication is in fact a project within the American pragmatist tradition.[428] In this way, pragmatism bridges conceptual, historical, and interdisciplinary relationships of communication into a practical discipline. By extracting principles,

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[426] Craig and Tracy, "Grounded Practical Theory…," 252.

[427] Russill, "Toward a Pragmatist Theory"; Chris Russill, "For a Pragmatist Perspective on Publics: Advancing Carey's Cultural Studies through John Dewey...and Michel Foucault?" in *Thinking with James Carey: Essays on Communications, Transportation, History,* eds. J. Packer and C. Robertson (New York, Peter Lang, 2006).

[428] Craig, "Metadiscourse…."; Robert T. Craig, "A Path Through the Methodological Divides," *Keio Communication Review*, 28 (2006): 9-17; Craig, "Reflection…," 7-11; Craig and Muller, *Theorizing Communication.*

methods, and practices and how meanings, values, morals, and ethics assist in identifying and solving problems,[429] ideals can be situated as reconstructions.[430]

Craig studies what works, what is useful, and what is productive in the ways people practice, participate, engage, and cooperate to ameliorate inherent conflicts and allow practical applications to emerge as praxis.[431] By engaging this method/approach, Craig is able to pinpoint a variety of forms of practical applied communication,[432] which enable a transdisciplinary meshing of practices across traditions and conceptual boundaries.

Craig cites reconstructionist Russill, noting that a theory needs to be evaluated based on the "practical implications and actual consequences" of choices and actions,[433] which in my opinion, is a statement reflecting Dewey's notion of everyday lived "experience." Pragmatics, according to Craig and Robles, in its simplest sense is "(something that is practical, concrete, or realistic) [which] contributes to [the framing of] philosophical pragmatism ... with usefulness and practical consequences."[434]

By focusing on Carey, as well as Craig's and Russill's astute observations, we are given an opportunity to reconstruct communication theory from a new ground—

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[429] Craig and Tracy, "Grounded Practical Theory…," 254-255.

[430] Ibid., 262.

[431] Craig, "Communication as a Practical …."; Craig, "Practical Disciplines…."; Barge and Craig, "Practical Theory…," 55-78.

[432] Barge and Craig, "Practical Theory…," 63.

[433] Craig, "Pragmatism in the Field…," 133.

[434] Robert T. Craig and Jessica S. Robles, "Pragmatics," in *Encyclopedia of Communication Theory,* eds. Steven W. Littlejohn and Karen A. Foss (Thousand Oaks, CA: SAGE Publications, 2009), 790.

embodiment. Embodiment is an organism in ongoing interaction with its environment.[435]

"Pragmatism has often tied knowledge to social practices and ethics, taken inquiry as communal and historically situated, and held that the world is open ended and in process."[436] Pragmatism overcomes long-established dualisms of body-mind, knowledge-action, fact-value, individual-society, and culture-nature. Dewey emphatically presents William James's definition of experience as one that

> recognizes in its primary integrity no division between act and material, subject and object, but contains them both in an unanalyzed totality. "Thing" and "thought" … refer to products discriminated by reflection out of primary experience, … this integrated unity.[437]

Dewey posited communication as the tent pole of pragmatism and "a method or habit of thought." He "advanced the notion that the consequences of *their* adoption determines the meaning of ideas, truth of propositions, or value of proposed actions"[438] [emphasis added].

Craig acknowledges the need for pragmatism to further facilitate dialogue, argument, and criticism, along with the need to remediate "nonparticipation, nonreflexivity or dogmatism, and [the overall] dysfunctional[ity of] discourse practices."[439] Both Craig and Russill recognize that inquiry is needed to inform reflexive social awareness. "Inquiry moves in a hermeneutic circle of preinterpretation, action,

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[435] Johnson, *The Meaning of the Body.*

[436] Peter Simonson, "Varieties of Pragmatism in American Pragmatism and Communication," in *American Pragmatism and Communication Research*, ed. D. K. Perry (Mahwah, NJ: L. Erlbaum, 2001), 1.

[437] Dewey, *Experience and Nature*, 18-19.

[438] Simonson, "Varieties of Pragmatism…," 1.

[439] Craig, "Pragmatism in the Field…,"138.

critical reflection, reinterpretation, and further action."[440] They argue that we need to look

at communication theory as both conceptual thought (theory) and situated action

(practice) in terms of a pragmatist view of theory-practice inquiry itself. But before

considering grounded practice theory further, we need to expand the notions of

embodiment and experience.

Embodiment and Experience

An embodied account of experience/culture is already present in the field of

communication, if we take seriously Craig's call for emergent traditions,

interdisciplinarity/ transdisciplinarity, and the more than two generations of overlapping

strands of embodied cognition within philosophy.[441] And while Craig's grounded

practical theory provides an integrative framework, Russill's pragmatist coherence

formulates the basis for an embodied aesthetics.

Boromisza-Habashi's interview with Craig states that communication can be

understood in

> broader context that a process of interaction is going on, and that process of
>
> interaction has consequences that go beyond those of any one particular message.
>
> The constitutive view sees communication as a collective process that produces
>
> outcomes. One of those outcomes is "meaning,' … "doing things together."[442]

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[440] Craig and Tracy, "Grounded Practical Theory…," 252.

[441] Peter Harries-Jones, *A Recursive Vision: Ecological Understanding and Gregory Bateson* (Toronto: University of Toronto Press, 1995); Johnson, *The Meaning of the Body*; Capra and Luisi, *The Systems View*.

[442] David Boromisza-Habashi, "Which Way Is Forward in Communication Theorizing? An Interview With Robert T. Craig," *Communication Theory, 23,* 4 (November 5, 2013): 431.

Running in parallel, I expand this conceptual frame to practices as embodiments in communication, where theory informs praxis, and praxis is embodied in theory.

Aesthetics is concerned with the nondualisms of mind–body and organism–environment. Both Dewey and Johnson[443] explicitly recount an organism's dynamic and ongoing interaction with its environment as everyday lived experience. Thus, the essential ideas of aesthetics are the conceptual framing of an embodied biological matrix, the notion of culture as experience, and what feelings and emotions are in relation to biological processes and patterns of meaning making.

In this sense, Johnson expands on Dewey's and James's integrated notion of experience for the modern reader as follows:

cognition is an organic, embodied process of enaction in which the organism is dynamically engaged with its surroundings and is not separated or alienated from them. So, there is no need for inner ideas that could somehow capture what is outer and other (the world). We are, instead, *in* and *of* the world. The patterns of our engagement are [recurrent, stable] sensorimotor patterns, image schemas, conceptual metaphors, and other imaginative structures.[444] [emphasis in the original]

Therefore experience is characterized both biologically and culturally as embodiment. Johnson states that mind and body are "not two separate and ontologically distinct entities or processes, but instead are aspects or abstractable dimensions of an

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[443] Dewey, *Experience and Nature*; Dewey, *Art as Experience*; Johnson, *The Meaning of the Body.*

[444] Ibid., 145.

interactive ... or 'enactive' (Varela, Thompson, & Rosch, 1991)—process."[445] Carey

concurs that "the symbolic and the artifactual are fused" in communication[446] and

therefore culture, whereby lived life experience becomes partly a frame of preproduction,

production, postproduction, and distribution. Whereas the artifactual directly correlates to

Dewey's notion of body, symbolic representations and symbols themselves emerge from

corporeality, which he designates as mind.

The nondual notion of these two containers is body-mind, which enacts discourse

and communication relating embodied metaphor as our language, again, and in other

words, embodiment.

What actually takes place when a living body is implicated in situations of

discourse, communication, and participation ... "body" designates the continued

and conserved, the registered and cumulative operation of factors continuous with

the rest of nature, inanimate as well as animate; while "mind" designates the

characters and consequences which are differential, indicative of features which

emerge when "body" is engaged in a wider, more complex and interdependent

situation.[447]

Thus, I would argue that embodiment is the foundation upon which the cultivation

of aesthetics can be viewed as integrative inquiry and communicative praxis. From

Cooren's responses to the embodied qualities and agency of the constitutive metamodel,

it is clear that Craig's call for an aesthetic tradition of "embodied performance"[448] and

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[445] Varela, Thompson, and Rosch, *The Embodied Mind*, 274.

[446] Carey, *Communication as Culture,* 39.

[447] Dewey, *Experience and Nature*, 217.

[448] Craig, "Metadiscourse…," 151; Craig and Muller, *Theorizing Communication*, 88.

Cooren's accentuating and revealing its constitution[449] are one and the same. And both play an integral role towards consummatory experiences.[450]

More recently, Craig distanced himself from Cooren's interpretation and creative reconstruction/remix.[451] But I believe both Craig and Cooren are engaged in a practical endeavor situated in the eventfulness of experience that lays the grounding premises in communication theory for the work of Lakoff and Johnson in embodied cognition by providing invaluable insight for establishing an embodied aesthetics of and for communication. This experientialist approach[452] echoes George Herbert Mead, who felt that an organism's conduct is "a dynamic whole … acting [in] and determining its environment. It is not simply a set of passive senses played upon by stimuli that come from without."[453] In this way, aesthetics would integrate empirical, dialogical, and philosophical approaches towards the recognition of embodied metaphors, image schemes, and a reintegration of art and science with publics/community.

According to Francisco Varela, Evan Thompson, and Eleanor Rosch in their book *The Embodied Mind*, what gets in our way of understanding experience is the human tendency to conceptualize contemplative reflection as "an abstract, disembodied activity." They propose by contrast, a mindful, "open-ended reflection ... in which the body and mind have been brought together. ... Reflection is not just *on* experience, but

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[449] Cooren, "Communication Theory at the Center."

[450] Dewey, *Art as Experience*, 143-144, 168.

[451] Craig, "The Constitutive Metamodel…."

[452] George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: University of Chicago Press, 1980/2003), 226-229.

[453] Mead, *Mind, Self and Society*, 25.

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reflection *is* a form of experience itself ... [and] can be performed with

mindfulness/awareness"[454] [emphasis in the original].

Recall also that Descartes disintegrated mind from body as two separate

phenomena, not as an "experiential, pragmatic approach," [455] where *bodymind* is a single

undifferentiated term. Embodied cognition

> is situated within a dynamic, ongoing organism–environment relationship; … is
>
> problem-centered and operates relative to the needs, interests, and values of
>
> organisms, … is not concerned with finding some allegedly perfect solution to a
>
> problem but, rather, one that works well enough relative to the current situation;
>
> and ... is often social and carried out cooperatively by more than one individual
>
> organism.[456]

In such a view, an organism in ongoing interaction with its environment and self-

organization is embedded within relational, complex adaptive dynamical systems to

which it correlates.

Biological Approach and Design Specs

I agree with Craig's prepublication reviewers[457] that a biological tradition,[458] or

better yet a biological approach embedded in embodiment, should perhaps be

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[454] Varela, Thompson, and Rosch, *The Embodied Mind,* 27.

[455] Ibid., 28.

[456] Johnson, *The Meaning of the Body,* 119.

[457] Craig and Muller, *Theorizing Communication*, 497.

[458] Craig, "Metadiscourse…," 151; Craig, "The Constitutive Model…," 362; Joseph N. Cappella, "The Biological Origins of Automated Patterns of Human Interaction," *Communication Theory*, no. 1 (1991): 435; Joseph N. Cappella, ed., "Symposium: Biology and Communication," *Journal of Communication* 46, no. 3 (1996): 4-84.

reconsidered.[459] In this way, Maturana and Varela's theory of autopoiesis, self-making[460] acts as one cornerstone for a biological approach's conceptual framing. It is worth noting that genetic, biodigital, metatechnology,[461] metacommunication,[462] biocommunication,[463] biosemiotics,[464] communibiology,[465] visual communication,[466] and media ecology[467] all incorporate embodiment in their communicative conceptual frames as well. Remember the old saying: no matter, never mind.

Furthermore, different scholars have arrived at similar conclusions independently. Consider that Antonio Damasio, a neuroscientist, and Craig, a communication

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[459] In "The Constitutive Model…," Craig cites these two articles: Tamara D. Afifi and Kory Floyd, "Communication, Biology, and Physiology: An Introduction to the Special Issue," *Communication Monographs* 82, no. 1 (2015): 1–3; and, René Weber, "Biology and Brains—Methodological Innovations in Communication Science: Introduction to the Special Issue," *Communication Methods and Measures* 9, no. 1–2 (2015): 1–4. However, the following biology based scholars should be included in any discussion of communication and biology: Jakob von Uexküll and Thure von Uexküll, *Kompositionslehre der Natur: Biologie als undogmatische Naturwissenschaft; ausgewählte Schriften* (Frankfurt am Main [u.a.]: Ullstein, 1980); Jakob von Uexküll, "An Introduction to Umwelt," *Semiotica* 134 (1-4) (2001): 107-110; or, Bruno Latour, "Why Gaia is Not a God of Totality," in "Special Issue: Geosocial Formations and the Anthropocene," *Theory, Culture & Society* (2016). Recently, some communication scholars have acknowledged some of these threads, for instance, Jefferson D. Pooley, "Communication Theory and the Disciplines," in *The International Encyclopedia of Communication Theory and Philosophy* (Malden, MA: Wiley Blackwell and the International Communication Association, 2016).

[460] Maturana and Varela, *Autopoiesis*.

[461] Sandra Braman, ed., *Biotechnology and Communication: The Meta-technologies of Information* (New York: Routledge, 2004).

[462] Robert T. Craig, "Metacommunication," *The International Encyclopedia of Communication Theory and Philosophy* (Malden, MA: Wiley Blackwell and the International Communication Association, 2016), 1–8; Peter A. Anderson, "Metacommunication," in Stephen W. Littlejohn, and Karen A. Foss, *Encyclopedia of Communication Theory* (Los Angeles, CA: SAGE Publications, 2009), 650-654.

[463] The BioCommunications Association (BCA), M. Attleboro. http://www.bca.org/about/about.html.

[464] Jesper Hoffmeyer, *Biosemiotics* (Chicago: University of Chicago Press, 2008); Jesper Hoffmeyer, *A Legacy for Living Systems: Gregory Bateson as Precursor to Biosemiotics* (New York: Springer, 2008).

[465] Michael J. Beatty, "Communibiology," *The International Encyclopedia of Communication*, ed. Wolfgang Donsbach (Malden, MA: Blackwell Publishing, Blackwell Reference Online. 2008), accessed August 28, 2016.

[466] See notes and citations related to Williams and Newton in Chapters II and IV.

[467] McLuhan and Gordon, *Understanding Media,* 17-35; Capra and Luisi, *The Systems View of Life.*

metatheorist, share the framing of embodied performance when considering human behavior as "several parallel lines of performance unfolding in time," whereby "[s]pecific emotions, focused attention, and particular sequences of action (behaviors) will appear from time to time, as appropriate for the circumstances."[468]

Embodied experience, the ongoing process, and mediated metadiscourse are the real test and application in a continually negotiated theory-practice continuum.[469] As researchers, we are constantly revisioning, reflecting, and re-evolving the processes of re-cultivation for communication theories and practices. Thus, through intentionalizing the constitutive metamodel and metadiscourse as concomitant communication strategies, Craig can be seen as envisioning the initial threads and conceptualization of embodied aesthetics for communication theory.[470]

In addition, embodiment can be explained in Cooren's terms as design specs,[471] which coordinate aspects of embodied cognition. Cooren posits staging, agency of artifacts actualized "in action and/or interaction,"[472] and conversation as coconstructed social forms and the transactional "embodied, situated, eventful character of communication."[473] He continues with the first-order transmission and second-order autopoiesis and self-organization of systems, "patterns are the product of hybrid

[468] Antonio R. Damasio, *The Feeling of What Happens: Body and Emotion in the Making of Consciousness* (New York: Harcourt Brace, 1999), 88.

[469] Robert T. Craig, "Practical-theoretical Argumentation," *Argumentation 10* (1996): 461-474; Craig, "Practical Disciplines...."

[470] Craig, "Metadiscourse...."; Craig and Muller, *Theorizing Communication.*

[471] Cooren, "Communication Theory...," 1-20.

[472] Ibid., 7.

[473] Ibid., 8.

interactions,"[474] and animation and agency in the study "of attitudes, traits, beliefs, feelings, and emotions … that appears to animate the discussion and can thus be felt or experienced." He closes with "the effects of production and reproduction of social order" or structures which can be "reinterpreted as other forms of agency that participate in and contribute to the performance of what is happening in any situation."[475] Finally, he acknowledges the "discursive reflection in a project of emancipation" taking in great accord and mobilizing different forms of agency to conceive positive "power, ideology, or domination."[476] So in this way, metadiscourse can lend coherence, and support for communication as a pragmatist metadiscipline, or as Craig implores in reducing Cooren's contribution to mere ventriloquism, is not really the point. [477]

In summary, then, after framing experience with a philosophy of language, embodied cognition, somatic sensations, emotions, and broad design specs, we can acknowledge that practices are embodiments in communication. It is where theory informs praxis, and praxis is embodied in theory. The overall intention here is to interpenetrate communicative discourse with these and other related concepts. Or as Peters wrote, "The middle ground of pragmatic making do" is where "the body is not a vehicle to be cast off, it is in part the homeland to which we are traveling."[478]

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[474] Ibid., 9.

[475] Ibid., 10.

[476] Ibid., 11.

[477] Craig, "The Constitutive Metamodel," 370.

[478] Peters, *Speaking into the Air,* 65.

However, Craig's and Russill's appropriation of pragmatism was soundly critiqued by Mats Bergman in 2012, who argued that they missed the realism inherent in pragmatism.

> Without real habits—that is, habits of action that truly work, as many of our ways of doing things seems to do—inquiry is not even possible. … The pragmatist affirms the real (pragmatic) efficacy of habits (including theoretical concepts)—their consequentiality—and is therefore normatively faced with the constant challenge of producing the habits most conducive to inquiry and amelioration, … the transformation of (real) habits.[479]

Subsequently, Craig acknowledged this "realist" connection of pragmatism and habits embedded within a complex materialist orientation,[480] which takes into account how our bodies are shaped by our environments and, in turn, how we shape the environments we inhabit. Even more explicitly, he previously noted, "I do hold a broadly realist view of the natural world and would not deny that human communication has evolved, biologically and culturally, in that world."[481] This is as close as Craig has come to embracing my framing of an embodied aesthetics approach in communication theory.[482]

Meanwhile, focusing on the reality of habits in their physical nature necessitates this shift to an embodied approach and will be further argued later in this chapter. My work has drawn on Johnson's orientation that is based on Dewey's conceptual framings

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[479] Mats Bergman, "Pragmatism as a Communication-theoretical Tradition," 218.

[480] Craig, "The Constitutive Metamodel…," 365.

[481] Craig, "The Materiality of Communication…."; Gina Neff, Brittany Fiore-Silfvast and Carrie Sturts Dossick, "Materiality: Challenges and Opportunities for Communication Theory," in *ICA 2013 Theme Book: Challenging Communication Research*, ed. Leah A. Lievrouw (New York: Peter Lang, 2014), 209-224.

[482] Jher, "An Aesthetic Approach…."

of pragmatism as "remaking experience ... determining the best means to some end" and interrogating the nature, adequacy, and appropriateness of those ends (in ongoing reflection and revision—ends-in-view). Johnson states that pragmatism "is about discerning the full meaning of experience and transforming experience for the better."[483]

Grounded Practical Theory

The significance of grounded practical theory is how it engages the reconsideration and reconstitution of habits in everyday life. Dewey stated that philosophy is "a ground-map of the province of criticism, establishing base lines to be employed in more intricate triangulations."[484] This follows from pragmatism because Craig offers another mode of inquiry into communication theory and practice in addition to the pragmatist metamodel of communication[485] in the veneer of the integration of grounded theory and practical theory-practice that engages the project of working on problem themselves.

This section will offer an overview and modes of inquiry in philosophy, which I will elaborate later in this chapter in regards to Craig's framing in communication theory. If philosophy, and especially a philosophy of communication, is a ground-map of criticism, then identifying the tensions, problems, and perplexity at hand in a situation is significant. 1) Methodological pluralism can be accomplished by mapping, or taking in the lay of the land, the factors that matter to the inquirer, and one can begin to pick out

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[483] Johnson, *The Meaning of the Body*, 282.

[484] Dewey, *Experience and Nature*, 309.

[485] Leonarda García-Jiménez, "The Pragmatic Metamodel of Communication: A Cultural Approach to Interaction," *Studies in Communication Sciences 14* (1) (2014): 86–93.

dimensions that are most relevant in a broad perspective. 2) Deliberative processes and

dramatic rehearsals can be understood as forms of reflective, engaged modes of inquiry.

3) As such, this imagining of a situation, as engaged reflection, can be employed to

transform the world for the better. This is the engagement into a creative and, what

Dewey calls the consummatory phase, transformative practice of what should be

understood as a continuous and ongoing nature of a situation.

This paragraph restates and ties together earlier points. Carey suggests that we

reformulate our idea of communication beyond reflection to action.[486] Relative to

communication, in *Experience and Nature* Dewey writes, "The heart of language [tool of

tools] is ... communication; the establishment of cooperation in any activity in which

there are partners, and in which the activity of each is modified and regulated by

partnership."[487] Carey echoes his sentiments by pointing to communication as ritual, "a

symbolic process whereby reality is produced, maintained, repaired, and transformed."[488]

Craig reflects on Carey's assertion in his book *Communication as Culture,* stating,

"Carey's metaphor of ritual emphasizes the cultural aspect of communication ...

[whereby] we ideally constitute a common world by participating in the rituals of a

shared culture."[489] Also, restated again, "every model *of* communication is also a model

for communication"[490] [emphasis in the original].

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[486] Carey, *Communication as Culture.*

[487] Dewey*, Experience and Nature*, 141.

[488] Carey, *Communication as Culture,* 19.

[489] Craig, "Pragmatism in the Field…,"128.

[490] Ibid.

Craig characterizes theory as embedded in a practice and where practice informs theory as a way to construct grounded practical theory[491] as a communicative discipline for the 21st century. Grounded practical theory enables conceptual frameworks and exemplars "to articulate, critique, and further advance already existing practical tendencies in the use of theory by applied communication scholars."[492]

It is important to note that Craig's long-term project is to establish a cohesive interactive academic field of communication wedding theory and practice. This theoretical framework generally results in praxis with the goal of solving problems or adequately bringing issues to light for further reflection. One of Craig's central concerns is how to identify and engage participants and practitioners in the application and feedback of theory and practice in—what Varela, Thompson, and Rosch originally called—its enaction.[493]

Thus, embodiment adds another important dimension to grounded practical theory and contributes to methodological pluralism. We now must expand the notion of grounded practical theory linking experience and embodiment.

In 1990 Lloyd Sandelands wrote, "What Is So Practical about Theory? Lewin Revisted," in which he explores Kurt Lewins's 1951 dictum, "there is nothing so practical as a good theory."[494] In the article, Sandelands's two types of knowledge, theory and practice, are incommensurable. In a 1996 article, Craig challenged Sandelands's view as linear and argued that theory (conceptual structures) and practice (embodied action)

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[491] Craig, "Communication as a Practice"; Barge and Craig, "Practical Theory…," 58.

[492] Barge and Craig, "Practical Theory…," 55.

[493] Varela, Thompson, and Rosch, *The Embodied Mind,* 147.

[494] Lloyd E. Sandelands, "What is So Practical about Theory? Lewin Revisited," *Journal for the Theory of Social Behaviour*, *20*(3) (1990) 235-262.

are connected in "Dewey's pragmatic theory of inquiry." This open-ended process can be tested and validated in experience (through practical judgment and skill) toward the resolution of problematic situations (theory, practice, and application).[495]

However, any description of the characteristics of experience remains selective, always a portion or partial view. Therefore, methodological pluralism can assist with interrogating our experience, where there is no single all-encompassing method of inquiry or one method that is context free or without supposition. All methods are based in values and cultural influences.[496] Similarly, there is no one overarching metanarrative that holds true for historiography and genealogical accounts. Research, debate, problem solving, and strategic (scenario) planning are well served with discrete methodologies, especially with specific circumstances, events, challenges, and the need for forward-thinking design protocols. Accordingly, there are cultural and situationally based contexts where diverse perspectives can work in independent, interpersonal, serial, simultaneous, centralized, radial, decentralized, and circularly participative ways.[497]

Pluralistic approaches bring a richer, fuller, and more robust account of experience. This can also be applied to multiple disciplines (interdisciplinarity and transdisciplinarity), communication theories, and philosophies working in relationship and in contextually dependent ways. Aesthetics offers a possible pathway to establish

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[495] Robert T. Craig, "Practical Theory: A Reply to Sandelands," *Journal for the Theory of Social Behaviour, 26.1,* (1996): 65-79.

[496] Johnson, Th*e Meaning of the Body,* 56.

[497] Jeremy D. Swartz, "Metamedia," Master of Science Thesis-Project, Interdisciplinary Studies. Presented at "Metaphi" in collaboration with the Jordan Schnitzer Museum of Art, University of Oregon, Eugene, Oregon, May 20, 2010; Jher, "Cybernetics and Metadesign: Modes of Embodied, Virtual, and Hybrid Communication*"* (paper presented at the American Society for Cybernetics and Bateson Idea Group Conference, Asilomar, Pacific Grove, CA, July 11, 2012); Francis Heylighen, Cliff Joslyn, and Valentin Turchin, "A Short Introduction to the Principia Cybernetica Project," *Journal of Ideas* 2, no. 1 (1991): 26-29.

integrated unities (experiences) in flow with circumstances and especially in the

multiplicity of seemingly everyday circumstances where conflicting priorities and vested

interests become apparent and/or disruptive.

Practical Theory

Practical theory enables conceptual frameworks and exemplars "to articulate,

critique, and further advance" already existing practical tendencies in the use of theory by

applied communication scholars. Barge and Craig's coauthored book chapter, entitled

"Practical Theory in Applied Communication Scholarship,"[498] engages three broad

approaches to the application of theory and practice:

- mapping: empirical(-explanatory) scientific theory, hermeneutical-
  interpretive social science, and critical theory;

- engaged reflection: practical theory and philosophical normative theory[499];

- transformative practice: research methodology, participation, and action in
  the world.

Mapping is theory itself—abstract concepts in relation to each other that give a lens in

order to see the world. On the other end of this spectrum is practice—events and

situations already happening in the world. Engaged reflection is a bridge between theory

and practice—an instance of a lens of theory applied to a practice. Our transformative

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[498] Barge and Craig, "Practical Theory…," 58.

[499] Craig, "Applied Communication…."; Craig and Muller, *Theorizing Communication*; Barge and Craig, "Practical Theory…," 59.

practices emerge from this convergence of theory-practice.[500] Therefore, "a practical theory is a normative reconstruction of a practice."[501]

Mapping

In the first approach, mapping is "a theory becomes a lens or prism through which to view, analyze, and critique a practice, and it is selected because it enables the theorist to consider questions that have not been addressed in previous research." Then, the researcher theorizes "a practice as a distinct activity from intervention." Finally, it is "judged according to its heuristic value ... whether this particular lens provides a useful way of viewing the phenomenon."[502]

Craig gives three main approaches to mapping, each of which is fulfilled by embodied aesthetics:

- empirical(-explanatory) scientific theory is directly approached by the physical sciences including physics, chemistry, biology, and cognitive science—which give us the capability to provide evidence and predictive explanations for phenomena;

- hermeneutical-interpretive social science[503] can be explored through image schemas, conceptual metaphors, imaginative structures,[504] and extended mind

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[500] Craig, "Applied Communication…."; Craig, "Metatheory"; Craig, "Practical Disciplines...."; Craig and Muller, *Theorizing Communication,* 59.

[501] Barge and Craig, "Practical Theory…," 59.

[502] Ibid., 63.

[503] Craig and Muller, *Theorizing Communication.*

[504] Johnson, *The Meaning of the Body.*

theory[505] examines meaning through texts, artifacts, and social situations how humans are self-interpreting beings with varying levels of self-awareness[506]; and

- critical theory challenges assumed belief structures to unveil material and ideological preconceptions and situations with an expressed goal of emancipation.[507]

Engaged Reflection

The second approach, engaged reflection, reconstructs Craig's conceptual framework for grounded practical theory in which he extends and evolves the applied approaches of Stephen Toulmin.[508] Craig's "rational reconstruction" of practice involves three interrelated theoretical levels:

- *problematic level*: dilemmas that are commonly experienced [e.g., routine].

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[505] Merlin Donald, "Material Culture and Cognition: Concluding Thoughts," in *Cognition and Material Culture: The Archaeology of Symbolic Storage*, eds. Colin Renfrew and Christopher Scarre (Cambridge, UK: McDonald Institute for Archaeological Research, 1998); Andy Clark and David Chalmers, "The Extended Mind," *Analysis* 58 (1) (1998): 7-19; Alva Noë, *Action in Perception* (Cambridge, MA: MIT Press, 2004); Robert K. Logan, *The Extended Mind: The Emergence of Language, the Human Mind, and Culture* (Toronto: University of Toronto Press, 2007); Richard Menary, *The Extended Mind* (Cambridge, MA: MIT Press, 2010); Andy Clark, *Supersizing the Mind: Embodiment, Action, and Cognitive Extension* (Oxford: Oxford University Press, 2011).

[506] Craig & Muller, *Theorizing Communication*.

[507] Ibid.

[508] Albert R. Jonsen, and Stephen Toulmin, *The Abuse of Casuistry: A History of Moral Reasoning* (Berkeley: University of California Press, 1988); Craig, "Practical-theoretical Argumentation," 461-74. Note: On the oral, particular, locally, and timely—see Stephen Toulmin, "The Recovery of Practical Philosophy," in *The American Scholar* (1988): 337-352. For secondary reading, see Joseph P.A.M. Kessels and Fred A. J. Korthagen, "The Relationship Between Theory and Practice: Back to the Classics," *Educational Researcher* 25, no. 3 (1996): 17-22.

- *technical level*: communication strategies available for managing [an interrelated web of] problems [e.g., strategic action].

- *philosophical level*: reasoned principles, grounded in the [alternative] situated ideals of ordinary participants, that can inform reflective thinking and discourse about problems and strategies [e.g., trade-offs].[509]

An application of embodied engaged reflection is design theory, which considers communication as a combination of theory and application that "bring[s] communicative practices into closer alignment" with the intention of facilitating "direct intervention into [a] specific situation to transform communicative practices." Examples of this approach include online education support, policy mitigation, third-party mediation, and dispute resolution.[510]

Recently, Craig and Tracy[511] offered Jackson and Aakhus's characterization of design as distinct from art and science[512] but in a seemingly similar way to Kaufmann's notion of the adjacent possible.[513] Finally, Craig and Tracy clarified that "situated ideals are not synonymous with the philosophical level of reconstruction, but they are the starting point for normative reflection."[514]

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[509] Craig, "Applied Communication….''; Barge and Craig, "Practical Theory…," 64.

[510] Barge and Craig, "Practical Theory…," 66.

[511] Craig and Tracy, "Building Grounded Practical Theory …," 236.

[512] Sally Jackson and Mark Aakhus, "Becoming More Reflective about the Role of Design in Communication," *Journal of Applied Communication Research* 42 (2) (2014): 125-134.

[513] Eve Mitleton-Kelly, "Ten Principles of Complexity and Enabling Infrastructures," in *Complex Systems and Evolutionary Perspectives on Organisations: The Application of Complexity Theory to Organisations* (Oxford, UK: Elsevier Science Ltd., 2007), 36.

[514] Craig and Tracy, "Building Grounded Practical Theory …," 232.

Transformative Practice

The third approach to practical theory is transformative practice, which utilizes the capabilities of both researchers and participants "grounded in a pragmatic–systemic approach toward inquiry." It emphasizes collaborative and participative research and analysis whereby "participants cocreate, and find ways to create new affordances and constraints for action."[515]

Craig and Muller characterize philosophical normative theory as "ideal principles .. .to evaluate and practice communication."[516] Contrapuntally, I would like to move this conceptual framing, again, towards the work of Johnson and his recovery of Dewey and imagine an integration of scientific, interpretive, critical theories as *pr*actical theory. We need to

> reestablish our visceral connection to ourselves, to other people, and to the world. It should help us rediscover the experiential depth of the situations we find ourselves in, so that we can base our inquiry and decisions on an appropriately complex understanding of the meaning of what we are encountering. And then philosophy must employ the capacities and tools of the embodied mind in an attempt to transform our situation for the better.[517]

Moving in the direction of aesthetics can be stated metaphorically by bridging the themes of three books: *Communication as Culture*, *Art as Experience*, and *Experience and Nature* (note that if Dewey had been able to, he would have retitled the book *Culture and Nature*). The emergent hybrid conceptualization would include communication as

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[515] Barge and Craig, "Practical Theory…," 67.

[516] Craig and Muller, *Theorizing Communication.*

[517] Johnson, *The Meaning of the Body*, 282.

culture/experience as art, or in other words communication as art. The proposed framing

of aesthetics would then be defined as the embodied colocation, co-operation,

copresence, and coevolution of communication as the enactment of moral

imagination[518]—an aesthetically and morally grounded creativity for inquiring into

emergent events, situations, and even objects of experience, engaging communication as

a radical pragmatic turn of theory-practice as field, discipline, and praxis. As Johnson

observes:

> We need a Dewey for the twenty-first century. That is, *we need a philosophy* [of
>
> communication] *that sees aesthetics as not just about art, beauty, and taste, but*
>
> *rather as about how human beings experience and make meaning. Aesthetics*
>
> *concerns all of the things that go into meaning—form, expression,*
>
> *communication, qualities, emotion, feeling, value, purpose, and more.* Instead of
>
> isolating the "aesthetic" as merely one autonomous dimension of experience, or
>
> merely one form of judgment, we must realize that aesthetics is about the
>
> conditions of experience as such, and art is a culmination of the possibility of
>
> meaning in experience.[519] [emphasis in the original]

The larger question requires us to ask questions regarding how aesthetics not only

acknowledges, enacts, and reflects on pragmatist embodied experience, but turns our

attention, intention, and innovation to moral imagination. In this way, we deepen our

exploration regarding how science (craft or techné) and art (high art or poiesis) fuse as

intelligent inquiry to interpenetrate the field of communications.

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[518] Johnson, *Moral Imagination,* 189-216.

[519] Johnson, *The Meaning of the Body*, 212.

Does Dewey have a way to bring pragmatist communication theory, publics, and art-science inquiry together in a way that offers some direction for the present and future? Dewey, Carey, Craig, Russill, Cooren, and Johnson, all in their own way, lead us to "lived experience" whereby democracy "will have its consummation when free social inquiry is indissolubly wedded to the art of full and moving communication."[520]

Finally, as Dewey concludes, "In the end, works of art are the only media of complete and unhindered communication between [organism] and [organism] that can occur in a world full of gulfs and walls that limit community of experience."[521]

Meliorism: Inquiry as Problem Solving

Most problems require solutions, and with many solutions come resolutions, all of which come with the need of imagination (meliorism). Scott Stroud[522] cites Dewey's definition, which "encourages intelligence to study the positive means of good and the obstructions to their realization, and to put forth endeavor for the improvement of conditions."[523] Clearly stated, we require solutions and resolutions to enrich more meaningful and harmonious interactions and transactions, leading to human flourishing (eudaimonia). According to Colin Koopman, meliorism "focuses on what we can do to hasten our progress and mitigate our decline"[524] with, to quote James, "a certain willingness to live without assurances or guarantees."[525]

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[520] Dewey, *The Public and Its Problems*, 350.

[521] Dewey, *Art as Experience*, 110.

[522] Stroud, *John Dewey.*

[523] Dewey, *Reconstruction,* 182.

[524] Colin Koopman, "Pragmatism as a Philosophy of Hope: Emerson, James, Dewey, Rorty," *The Journal*

It is important to note transitions, whereby everything is temporally and historically situated[526] and, according to Richard Rorty, "a willingness to substitute imagination for certainty, and curiosity for pride."[527] In short, we must come to terms with the inevitability of change and the constant flow of transformations that surround us. Russill invokes Dewey when he writes:

> It is in response to a problem, to problematization, that inquiry and communication are linked together, as problem and response; it is this mode of criticism that reconstructs prevailing and proposed states of affairs *as* responses to problematic situations. ... Contemporary publics exist not only *by* problematization ... but *in* problematization.[528]

In Dewey's *Public and Its Problems*, intelligence is characterized as a form of inquiry which should rightly be thought of as neither scientific, nor artistic, but as an integration of the two as art-science.[529] Joli Jensen in 2001 also invoked Dewey when she stated that the "imagination is the way in which individuals put themselves in other's places, the way that human loyalties operate, the way that thought and desire are commanded" and "art is

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of Speculative Philosophy 20, 2 (2006): 107.

[525] William James, "The Absolute and the Strenuous Life," in *Pragmatism and the Meaning of Truth*, ed. Frederick H. Burkhardt, Fredson Bowers, and Ignas K. Skrupskelis (Cambridge, MA: Harvard University Press, 1975), 107.

[526] Colin Koopman, *Pragmatism as Transition: Historicity and Hope in James, Dewey, and Rorty* (New York: Columbia University Press, 2009), 25.

[527] Koopman citing Richard Rorty, "Hope in Place of Knowledge: A Version of Pragmatism" (1994), in *Philosophy and Social Hope* (London: Penguin, 1999), 88.

[528] Russill, "For a Pragmatist Perspective…," 74.

[529] Dewey, *The Public and Its Problems*.

a form of imaginative kindling."[530]

In this author's opinion, meliorism should be encouraged through the application of political economy,[531] where history, sociality, ethics, and praxis can function as an imaginative means for creating new hypotheses and explanations in assessing exchange values and meanings, especially the development of the digital humanities, where "science and technology are melding with the humanities."[532] This can be considered another approach in which pragmatism acts as a form of praxis.

Aesthetics as Transforming Experience

The popular view of aesthetics simply views only a certain range of feelings and emotions, or what is commonly held as the subjective experience of art. Aesthetics is generally defined as "the branch of philosophy that examines the nature of art and the character of our experience of art and of the natural environment."[533]

Aesthetic inquiry is the engagement with experience as lived experience, aesthetics as common human experience. The assumption of a subjective versus objective dichotomy is false. Both subject and object are abstractions for the various purposes, and in turn each is, on its own, a mistaken description of experience. In this sense, it is helpful to recall I. A. Richards and C. K. Ogden's two types of abstraction: 1) descriptive

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[530] Joli Jensen, "Art, the Public, and Deweyan Cultural Criticism," in *American Pragmatism and Communication Research*, ed. David K. Perry (Mahwah, NJ: L. Erlbaum, 2001), 119.

[531] Craig, "Metadiscourse…."; Leonarda García-Jiménez and Robert T. Craig, "What Kind of Difference Do We Want to Make?" *Communication Monographs* 77, no. 4 (2010): 429-31.

[532] Jim Leach, "The Revolutionary Implications of the Digital Humanities," in speech to the Fifth International Conference of HASTAC, University of Michigan, National Endowment for the Humanities, 2011. Cited in Vincent Mosco, *To the Cloud: Big Data in a Turbulent World* (Boulder, CO: Paradigm Publishers, 2014), 191.

[533] Feagin, "Aesthetics," 11-13.

(cognitive, objective, concepts, formal, universal, public) and 2) emotive (feelings, subjective, emotions, informal, relative, private).[534] We require these two concepts to be integrated as a whole and continuous framework.

Similarly, while science is seen as value neutral and objective, engaging certain modes of inquiry, every science has values. For example, people must decide/choose what phenomena that they will focus on and attempt to explain. What your values are subjectively thus determines what is to be evaluated, what is important or obvious, and the evaluative criteria one chooses. In science, the aesthetic criteria have and continue to include the following: simplicity, comprehensiveness, generalizability, and elegance. It is important to note that even these criteria are in flux and have been critiqued by the sciences of complexity. Science and values are not distinct methodological orientations, but are interwoven ways to talk about an embodied aesthetics of meaning.

Clearly, aesthetics is more than description or judgment of art. Aesthetics concerns everything that goes into meaningful experience, in other words, a remaking, resolving, solving, and dissolving problems we face. Aesthetics is an integrated form of inquiry into what can be called the aesthetic dimensions of human experience, meaning and significance, rather than distinct kinds of experience (scientific, moral, technical, theoretical, aesthetic, etc.) of a field. Aesthetics is not the be-all-end-all but has been ignored and downplayed in the traditions of communication that we have inherited. By recovering aesthetics, we can move to a more adequate account of experience.

Communication as art is the exemplary process of meaning making.[535] Aesthetics pertains to the ways in which meaning plays out in embodiment or how an organism's

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[534] Ogden and Richards, *The Meaning of Meaning.*

ongoing interaction with its environment is always contextually dependent on experience/culture. In appropriating the term aesthetics, which was previously only associated with the emotive characteristics of experience, I am proposing a reconstruction of the notion of aesthetics as emergent in a complex, nondualistic meaning of everyday experience.

As part of this reconstruction, the investigation of the nature of feelings requires additional exploration in relationship to aesthetics. Feeling is "the newly actualized quality acquired by events previously occurring upon a physical level, when these events come into more extensive and delicate relationships of interactions."[536] In a similar vein, Damasio elucidates emotions as "complicated collections of chemical and neural responses, forming a pattern ... advantageous to the organism ... to assist the organism in maintaining life" by regulating and representing the state of the body. It is important to note that culture/experience "plays a role in shaping some inducers [but] do[es] not deny the fundamental stereotypicity, automaticity, and regulatory capacity of ... emotions."[537] Constitutive responses or background emotions (e.g., tension/relaxation, fatigue/energetic, malaise/well-being) are "conditions of internal state[s] engendered by ongoing physiological processes or by the organism's interactions with the environment or both."[538]

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[535] One example: Fred Forest, "For an Aesthetics of Communication," *Web Net Museum* (1984); Fred Forest, "Aesthetics and Telecommunications Systems," *Leonardo* 24, no. 2 (1991): 137-38.

[536] Dewey, *Experience and Nature*, 204.

[537] Damasio, *The Feeling of What Happens,* 51.

[538] Ibid., 52.

Meanwhile, Gross has argued that all symbolic actions and meaning making are "communicative works of art."[539] He echoes Jensen, who restates Dewey's maxim "art as experience": "aesthetic experience is human experience ... notic[ing] and respect[ing] the ways in which aesthetics penetrate everyday life."[540] Gross states, albeit about the creation and appreciation of a work of art, "symbolic communications ... require ... perception, discrimination, and organization ... [which] arises out of experience in choosing, transforming and ordering."[541] Jensen notes that the ways in which we see art as experience is everyday life: "Communication then becomes a form of art that motivates us to feel, think, and act in ways that break the bonds of our ingrained habits and norms ... [W]e discover a sense of the mystery and potential that surrounds us."[542] Meanwhile, Lary Belman in 1977 called our attention to "empathy and foresight"[543] as two central critical conceptual frames of Dewey's aesthetics.

It is important to note here the alignment/recognition of feminism within this discussion. It might be argued that feminism "welcomes a plurality of perspectives" and "focus[es] on the importance and usefulness of talk, connectedness, and relationships."[544] Craig and Muller's citation of Ashcraft's (2005) explicit definition of feminism as "the dynamic, situated, embodied, and contested process of creating systems of gendered

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[539] Larry Gross, "Art as the Communication of Competence," *Social Science Information* 12 (October 1973): 139.

[540] Joli Jensen, "Questioning the Social Powers of Art: Toward a Pragmatic Aesthetics," *Critical Studies in Media Communication 12*(4) (1995): 374.

[541] Gross, "Art as the Communication…," 106.

[542] Nathan Crick, "John Dewey's Aesthetics of Communication," *Southern Communication Journal* 69(4) (2004): 303-319.

[543] Lary Belman, "John Dewey's Concept of Communication," *Journal of Communication* 27(1) (1977): 29.

[544] Craig and Muller, *Theorizing Communication*, 88; Craig, "Metadiscourse…."; Kramarae, "Feminist Theories…."

meanings and identities by invoking, articulating, and/or altering available discourses"
aligns in solidarity with embodied aesthetics.[545]

Finally, it may be helpful to recall Johnson's conclusion that neatly summarizes
the essence of embodied aesthetics:

> Aesthetics is properly an investigation of everything that goes into human
> meaning-making, and its traditional focus on the arts stems primarily from the
> fact that arts are exemplary cases of consummating meaning. However, any
> adequate aesthetics of cognition must range far beyond the arts proper to explore
> how meaning is possible for creatures with our types of bodies, environments, and
> cultural institutions and practices.[546]

Conclusion

I have responded to Craig's call for an aesthetic tradition and Cooren's call for a
conceptual framing of embodiment. While Craig, Russill, and Stroud engaged Dewey in
the argument that there was no cohesion in the field of communication, Barge and
Craig's grounded practical theory is at its essence a pragmatist project. An embodied
grounded practical theory as aesthetics provides an integrative approach to lived
experience, which brings diverse approaches to a reflexive theory-practice continuum.
This continuum echoed by Hickman harmonizes "as phases of inquiry and as partners in
the production of new and more intelligent outcomes."[547] Ultimately, Craig's

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[545] Craig and Muller, *Theorizing Communication*, 497.

[546] Johnson, *The Meaning of the Body*, xi.

[547] Hickman, *Philosophical Tools,* 7.

interdisciplinary project integrates traditions together to form a coherent whole—a form

of pragmatism—for the discipline of communication.

In building a case for Dewey's experience in relationship to embodiment,

methodological pluralism, and meliorism, aesthetics engages integrative inquiry and

communicative praxis cultivating an embodied approach to pragmatism. Such

transdisciplinary inquiry, which serves as an experiential experimentation with

community continues to be my conceptualization of metamedia.[548]

Regardless of which mode of pragmatic inquiry we align ourselves with, all the

authors in one way or another agree that communication, art, and participation "can only

be multiplied through social interaction and sharing."[549] Hickman echoes this sentiment

when he paraphrases Dewey: "communication involves taking naturally occurring

experiences and making them more meaningful by relating them to other naturally

occurring experiences. This is an art." Hickman continues, "Communication is a

multiplier."[550] Or in Dewey's words,

> We become capable of perceiving things instead of merely feeling and having
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> them. To *perceive* is to acknowledge unattained possibilities; it is to refer the

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[548] Jher, *Metamedia at the University of Oregon*, Installation-presentation during the Open Platform's Institutions track at the Open Engagement International Conference, Littman Gallery, Portland State University, Portland, Oregon, May 19, 2013; Jher, and Carl Bybee, "A Contemplative Metamedia Literacy Education" (poster session presented at the Inaugural International Symposia for Contemplative Studies, Denver, Colorado, April 27, 2012).

[549] Larry P. Gross, *On the Margins of Art Worlds* (Boulder, CO: Westview Press, 1995), 15.

[550] Larry A. Hickman, *Pragmatism as Post-postmodernism: Lessons from John Dewey* (Vol. 21). (New York: Fordham University Press, 2007), 146.

present to consequences, apparition to issue, and thereby to behave in deference to the *connections* of events.[551]

Again, the thin velum between the theory-practice of communication and art becomes apparent, whereby "works of art are the only media of complete and unhindered communication."[552]

I take Dewey's request, paraphrased by Jensen, "to dispense with illusory causes and cures, we can focus instead on how we construct the world—the categories with which we think. Perhaps then we can imagine different categories, ones that are more generous or truthful or responsive or tolerant."[553] In a journal article, Jensen reminds us to "spend less time exhorting, prophesying and declaiming, and more time watching, [active] listening and responding. [Dewey] ask us to talk with, not to, and [along with] other people."[554] Further, as Dewey writes, quoting his friend and colleague Albert Barnes (noted in Chapter III), "What is called the magic of the artist resides in his ability to transfer these values from one field of experience to another, to attach them to objects of our common life, and by his imaginative insight make these objects poignant and momentous."[555] Dewey brings us back to communication as follows:

> Communication is consummatory as well as instrumental [think of instrumental as
> an intermediate function, not an end]. It is a means of establishing cooperation,
> domination and order. Shared experience is the greatest of human goods. In

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[551] Dewey, *Experience and Nature*, 143.

[552] Dewey, *Art as Experience*, 110.

[553] Joli Jensen, *Is Art Good for Us?*, 206.

[554] Jensen, "Questioning the Social Powers…," 377.

[555] Dewey, *Art as Experience*, 123.

communication, such conjunction and contact as is characteristic of animals becomes endearments capable of infinite idealization; they become symbols of the very culmination of nature.[556]

Or, in other words, think of an ecology of experience as communication and culture as art.

This chapter has argued for an embodied aesthetics as a contribution to communication/media studies, and it is clear that this links to the ways in which curation is enacted in the world. Chapter VI addresses and explicates the engagement of a curing, healing, and reparative process—in a melioristic sense—of curation. As such, it is how a pragmatist mode of inquiry via embodied aesthetics and ethics is applied to an interdisciplinary (pluralistic) and international experience.

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[556] Dewey, *Experience and Nature*, 157.

CHAPTER VI

A NEW NOTION OF CURATION AND CONCLUSIONS

"It goes without saying that when the materials of design are not plastics, wood, ceramics, or glass [or documents, information, or any forms of mass communications and social media], but rather living beings or living tissues, the implications of every project reach far beyond the form/function [binary opposition] equation and any idea of comfort, modernity or progress. Design *transcends* its traditional boundaries and aims *straight* at the *core* of the moral sphere, toying with our most deep-seated *beliefs*. In designers' ability to build *scenarios and prototypes* of behavior lies a power that they should protect and cherish, and that will become even more important in *the future*." [italics added]

– Paola Antonelli[557]

This chapter presents an overview and consummations to this dissertation, with brief indications of where research question responses were discussed. A general discussion of new notions of curation and its relation to communication, embodied meaning and praxis, is included with more detailed reflections on various aspects and issues related to curation. This chapter ends with conclusions and implications for the future.

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[557] Paola Antonelli, "Vital Design," *Bio Design: Nature, Science, Creativity*, ed. William Myers (New York: Museum of Modern Art, 2012), 7.

New Notions of Curation and Communication

This dissertation has brought forward marginalized resources of embodied cognition in communication theory to re-vitalize and ecologize communication theory-practice. We need a novel pragmatist conception of curation, not merely preservation and presentation of artifacts, but a meliorative (problem-solving) reparative engagement relative to the values that are operative in a given situated context.

Curation is not merely understood as a warehousing of artifacts/objects, a repository or storehousing of collective memory, not that there is not a place for it. We need to re-conceive curation as a participatory activity, a melioristic remaking of experience for the better, a transformation of experience, as a caring for, as a repair of, as a curative mode supported by a pragmatist notion of experience, meaning, and values.

This project has focused on developing and furthering *curation* as a mode of rhetorical inquiry into how concepts can lead to action for civic engagement. It is a process that helps us to question values and interrogate new media technologies—or stated similarly—where values are questioned and new media technologies are interrogated, and how they construct an interactive dialogue with other technologies. Curation is fundamental to constructively question values that are implicit in emergent media technologies and how those profoundly affect our everyday lives. From this perspective, communication is understood as an aesthetic process of embodied human meaning-making, and as such, aesthetics pertains to the ways in which meaning plays out in embodiment, how an organism's ongoing interaction with its environment is always contextually-dependent on experience/culture. Again, in appropriating the term

aesthetics, which was only associated with the emotive characteristics of experience, a new space for reconstructing aesthetics in a complex meaning of everyday life emerges.

Specifically with this expanded notion of communication/art and aesthetics, I offered three examples of this enriched conception of aesthetic inquiry as a participatory mode of transformative engagement.

The first was Jane Addams' on-the-ground social engaged settlement house and its contemporary dynamic memorial, Hull-House Museum, as a "site for the interpretation and continuation of the historic ... vision, linking research, education, and social engagement."

The second was the collaboration between John Dewey and Albert Barnes in the establishment of rhetorical mode of inquiry in work of the Barnes Foundation, an institution to promote "education and the appreciation of the fine arts and horticulture."

The third was the World's Fair, specifically, the World's Columbian Exposition, and its material, cultural, social, and political implications.

Finally, I engaged this recovered and new enactment of curation as an interdisciplinary and international research experience and identified emerging themes for ecologies of media, civic media, the philosophy of language, communication, information, and technology, with specific emphases on embodied meaning-making, ethics and aesthetics.

This curational approach is echoed by scholars from a variety of disciplines including:

- Philosophy (Shusterman):

    Transactional experience also connotes the idea of experiments in

    transcending disciplinary boundaries, transgressing entrenched

    dichotomies, and transforming established concepts or topics, together

    with the idea that these transactions can succeed in advancing both theory

    and practice through the experiences and lessons that such experiments

    induce. *Pragmatist Aesthetics* represents my first foray into this

    transactional mode of theory, challenging the familiar aesthetic dualisms

    of art versus life, high art versus popular culture, the aesthetic versus the

    practical and political.[558]

- Museum Education (George Hein):

    Exhibition content and purpose … articulate how its controversial

    exhibitions are intended to support progress towards a more inclusive,

    democratic society. Changing museum practices … re-examine

    relationships with communities and become more inclusive and

    collaborative and [to] share authority with community members … one of

    "stewardship" and [to] an acceptance of the validity of sacred values in

    various cultures.[559]

- Anthropology (Paul Rabinow):

    Dewey advocates … reason is a practice, through which the thinker

    attempts to establish what might well be called a *curational* relationship

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[558] Richard Shusterman, "Catalog Essay: *Aesthetic Transactions: Pragmatist Philosophy through Art and Life*," 2012. http://aesthetictransactions.webs.com.

[559] George E. Hein, "The Role Of Museums In Society: Education And Social Action," *Curator: The Museum Journal* 48 (4) (2005): 357-363.

attuned to specific situations, one adjusted to the specific problem at hand,

one that had to be taken up in a manner that consequently required it to be

flexible in the standards and forms appropriate to the challenge to which

the philosopher was challenged to respond … as simultaneously both a

means and an end, directed the thinker to search for a mode of logic. Logic

… is the commitment to inhabiting inquiry in its particularity, uncertainty,

and rigor.[560] [emphasized in the original.]

- Politics (Peter Weibel and Bruno Latour):

    Any exhibition is an assembly—an assembly with a political character …

    what essentially constitutes every public assembly that is "thing"-based: a

    complex set of technologies, interfaces, platforms, networks, media, and

    "thing," which gave rise to a public sphere.[561]

Each in their own way reimagines an integration of communication/art and

society and vis-à-vis experience/culture through shared museum and commons-based

community practices. What emerges from this is a more adequate notion of curation—not

an archaeology only, but an active engagement of repair and care (meliorism).

From a legal perspective, a contemporary museum is defined as "a non-profit

making permanent institution in the service of society and of its development, open to the

public, which acquires, conserves, researches, communicates and exhibits, for purposes

of study, education and enjoyment, the tangible and intangible evidence of people and

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[560] Paul Rabinow, "How to Submit to Inquiry: Dewey and Foucault," *The Pluralist* 7, no. 3 (2012): 26.

[561] Peter Weibel and Bruno Latour, "Experimenting with Representation: Iconoclash and Making Things Public," *Exhibition Experiments*, eds. Sharon Macdonald and Paul Basu (Malden, MA: Blackwell Publications, 2007), 104.

their environment."[562] From a historical perspective, the typical notion of curation is as an understanding of the material and scientific analysis of a work of art as related to the society and/or culture of the work. In this traditional sense of curation, the question, "What makes a work authentic?" is most important. This mode of inquiry involves understanding the provenance, material analysis, and connoisseurship of a work. To be clear:

- **Provenance** is "the full history and ownership of an item from the time of its discovery or creation to the present day, from which authenticity and ownership is determined."[563] Additionally, Wikipedia defines it as "the chronology of the ownership, custody or location of a historical object."[564] It would potentially include the medium, label, date, artist, and subject matter, and its subsequent chain of custody. Establishing provenance requires documentation or records of the work (where possible) in the authentication of said work, to establish the hands of ownership, or authenticity.

- **Scientific analysis** in this sense refers to testing the physical properties of the art (e.g., the makeup of paints, pigments, and other tangible characteristics of the work determined by e.g., chemical analysis).

- **Connoisseurship** deals with the expert community of practice in the authentication of the work by assessing its visual and physical aspects (e.g., pattern signatures assessed by human and/or computer).

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[562] "Glossary," in Merryman, 1239-1240.

[563] Ibid., 1240.

[564] Wikipedia contributors, "Provenance," *Wikipedia, The Free Encyclopedia,* https://en.wikipedia.org/w/index.php?title=Provenance&oldid=727565872.

My notion of curation is the enactment of understanding as rhetoric. This differs from truth affective rhetoric, the "how to communicate," or in other words, an organized way of explaining spoken language, versus the rhetorical process enacting the understanding. The first notion is the nugget of knowledge versus the process of enacting an engagement. Curation should be enabling certain types/modes of activity as related to meliorism, that is problem solving. This enactive conception of rhetoric brings forth curation as a rhetorical process, an engagement of (not the discovery of) meaning, but the participatory and enactivated notion of meaning in a collaborative way.

Typically, when we go to museums, one goes inside and looks at things. However, museums are now becoming more interactive (e.g., the Jane Addams Hull-House Museum, the Newseum[565] and especially museums of science and industry[566]) encouraging participants to touch, taste, feel, and/or interact/transact along with seeing. Museums are evolving from the "look, don't touch" model to "you must interact with the artwork"; for example, 3D spatial environments are the works of art, and entering a work is increasingly being employed as a technique in curation (imagine the work of the new labor museum in Jane Addams' Hull-House), or "touch" becoming environmental and

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[565] "The Newseum, headquartered in Washington, D.C., is dedicated to free expression and the five freedoms of the First Amendment: religion, speech, press, assembly and petition," http://www.newseum.org/about; and, "The Newseum Institute, headquartered at the Newseum in Washington, D.C., is dedicated to free expression and the five freedoms of the First Amendment: religion, speech, press, assembly and petition." http://www.newseuminstitute.org/about/.

[566] "The Museum of Science and Industry (MSI), Chicago—one of the largest science museums in the world—is home to more than 400,000 square feet of hands-on exhibits designed to spark scientific inquiry and creativity." http://www.msichicago.org/explore/about-us/about-the-museum. Oregon Museum of Science and Industry (OMSI): "OMSI began with the exhibition of Oregon's rich natural resources with the opening of the City Hall Museum in 1896," http://www.omsi.edu/history-and-mission.

ecological, as in Olafur Eliasson's *Riverbed* (2014-2015)[567] and Per Kristian Nygård's *Not Red But Green*.[568]

This discussion has summarized some of the responses to RQ1: What is "curation" and how does a deeper understanding of this concept better help communication and media scholars reconceptualize what "communication" and "media" are? This question was also answered in the introduction to the dissertation and in Chapters II, IV, and V.

Inquiry as Interdisciplinary Synthesized Places, Spaces, and Traces

This dissertation covered a methodologically pluralistic account of inquiry, including but not limited to curation as constructive education, care, repair, moral knowledge/imagination, and emergent synergies (e.g., engaging intellects in new ways).

Curation as Constructive Education

Experience and experimentation (the empirical method) are the essential instruments of Dewey's vision of an "ideal school," where the museum, as a place of inquiry would be situated in a central courtyard with classrooms of the arts and sciences surrounding it (much like the University of Oregon campus).

Dewey in *The School and Society* (1900) "illustrates ... [the] ideal school [or museum]. In the upper corners [as] the laboratories; in the lower corners [as] the studios

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[567] Olafur Eliasson, *Riverbed,* Louisiana Museum of Modern Art, Humlebæk, Denmark, August 20, 2014 - January 1, 2015. http://olafureliasson.net/archive/exhibition/EXH102282/riverbed.

[568] Per Kristian Nygård, *Not Red But Green*. NoPlace, Oslo, Norway, 2014. http://www.perkristiannygaard.com/Not-Red-But-Green.

for art work."[569] It is "a living union of thought and the instruments of expression."[570]

And in this way, "the isolation of studies as well as parts of the ... system disappears.

Experience has its geographical aspect, its artistic and its literary; its scientific and its

historical sides. All studies arise from aspects of the one earth and the one life lived upon

it."[571] This model represents an interdisciplinary modality proposed at the beginning of

the last century (See Figure 9.) This becomes a habitat for the recognition of habits, the

creation of new habits, and the changing opportunities that can lead to further inquiries
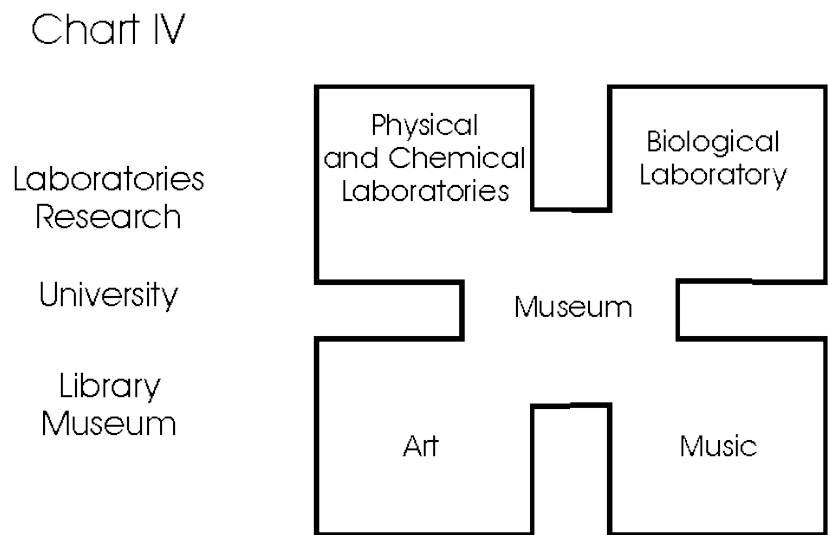
and innovations.

Figure 9. Dewey's ideal school. Source: John Dewey, *The School and Society*

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[569] John Dewey, *The School and Society* in Vol. 1 of *The Middle Works*, ed. Jo Ann Boydston (Carbondale, IL: Southern Illinois University Press and Intelex Electronic Edition, 1900/1996), 51-52.

[570] Ibid., 53.

[571] Ibid., 54.

Hein elaborates that "museums should grow out of life experiences and be used to reflect back on life."[572] For Hein and Dewey, "regular museum visits, along with other kinds of field trips, should be a component of the educational program, not a special once-a-year activity."[573] I incorporate this approach in my own pedagogical theory-practice, especially in a course that I created entitled, "Ecologies of Media."[574]

To restate again from Chapter III, Dewey criticized traditional museums in *Art as Experience*, when he stated that

> the museum conception of art, still shares the fallacy from which that conception springs. For the popular notion comes from a separation of art from the objects and scenes of ordinary experience that many theorists and critics pride themselves upon holding and even celebrating.[575]

And, again, Hein reiterates Dewey,

> art museums are primarily the products of the capitalist urge to flaunt wealth, and that the fine arts have thus been separated from the rest of life and cloistered in selected, inaccessible places; such practices evoke a destructive dualism—the

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[572] Hein, *Progressive Museum,* 46.

[573] Ibid. 46.

[574] From the course syllabus for J412: Ecologies of Media, at the School of Journalism and Communication, University of Oregon: "This course covers foundational topics and introduces advanced areas of inquiry in the ecologies of media, communication, culture, and society. Various sections will examine these codes, modes and spaces through the lenses of: (1) analogue, (2) digital, (3) continuum between the two, (4) one's moral imagination, and (5) curation [through the lens of media archaeology]. Traditionally media ecology in the Americas is defined as *the study of (media) environments,* especially in relation to technology/techniques/technics, modes of human interaction. More recently, the European strain focuses on the study of materiality, complex systems, and media archaeology. Each of the established and emerging scholars featured in the syllabus paints a rich tapestry of communication theory-practice relating embodiment along with aesthetics and ethics. We will take a problem-solving approach overall. The purpose of this course is to identify emerging areas of research, design methods, and project planning-to-implementation for each student."

[575] Dewey, *Art as Experience*, 12.

separation of fine arts from practical arts and of art and its appreciation from other life activities.[576]

As discussed in the Barnes exemplar in Chapter III, Dewey and Barnes were looking for an evolving account of art and in turn the enactive notion of curation. We need to recognize the whole process not as an algorithm (or as in the capacity to digitally "curate" one's Spotify, Instagram, or other social media accounts) but instead as a bodily based rhetoric as performative of curation as experiential, as reparative performance, especially in relationship to emerging issues in technology. Mark Johnson states in *Morality for Humans: Ethical Understanding from the Perspective of Cognitive Science*,

> I do not think it is reductivist to see moral knowledge as a form of technology ... in its very broadest sense. ... as any intelligent, skillful means for transforming experience. This is the expansive sense in which [John] Dewey understood the term: "...all the intelligent techniques by which the energies of nature and [humans] are directed and used in satisfaction of human needs; it cannot be limited to a few outer and comparatively mechanical forms."[577]

I would like to note here that the role of the curator in the institution (versus the independent curator) can potentially act as assistive mode of inquiry that helps to break an institution out of its own habits, or in other words its own "moral knowledge" as technology.

The other exemplar that I focused on was Jane Addams and Ellen Gates Starr's Hull-House settlement in Chicago, especially the Labor Museum. As noted by Maurice Hamington in Chapter III, Jane Addams and Hull-House fostered "sympathetic

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[576] Hein, *Progressive Museum*, 48.

[577] Johnson, *Morality*, 227-8, cites this quote by Dewey from "What I Believe," 270.

knowledge" in this way as care (or in my words, curation) as a "disruptive function." It was their vision and application of engaging a tangible place where scholars, children, the public, and other could find commonplace and purpose together.

The activities at Hull-House acknowledge and employ an embodied aesthetics and embodied ethics of organisms in ongoing interaction with their environment. It is the creation of this small-world society that was able to assist in curing, caring, and healing the habits and habitats of the residents and transforming their health and wellbeing.

I echo this sentiment with the contemporary resurgence of what is now called the "maker movement," or DIY (do-it-yourself) culture, not only from both software and hardware points of perspective, but its integration as an open ecology at makerspaces. Makerspaces exemplify today's Hull-House sympathetic knowledge environments, whereby technologies of action and moral knowledge can be handed across generations in a open-ended approach fostering social learning and mutual empathy in the development of new skills, opportunities, and lifestyles.

Like these makerspaces, the contemporary Hull-House "museum preserves and develops the original Hull-House site for the interpretation and continuation of the historic settlement house vision, linking research, education, and social engagement. The Museum … make[s] connections between the work of Hull-House residents and important contemporary social issues."

Additionally, the Oregon Museum of Science and Industry (OMSI) includes "Design Lab, a flexible, creative space that can accommodate a range of activities and

groups, partnerships, residencies, classes, and demonstrations, making and testing

designs, and sharing results."[578]

To quote John Dewey again, in his essay, "The School as Social Centre"

regarding Jane Addams' Hull-House, imagine a "social clearinghouse ... where ideas are

incarnated in human form and clothed with the winning grace of personal life." Society

becomes the body, an ecological material process civically engaged in the world.

Again, curation is, not merely the moving around of artifacts in space with a story

to tell but a dynamic form of embodied inquiry, a caring for and repair of fundamental

assumptions related to political, social, and economic issues and choices that form our

world. This dynamic structuring of modes of engagement, opening access to unknown

commons, and in turn creating new realities brings forth new and emerging patterns of

experience for future inquiries to thrive. In this sense, curation is the enactment of

technology. Mark Johnson cites John Dewey, when he states

> there are ... technologies in which the ends are not determinately specified in
>
> advance, and where ends-in-view can change through the operation of an
>
> intellectual technology to help us work through a problematic situation,
>
> transforming it for the better. Larry Hickman (1990) has championed this broad,
>
> expansive reading of Dewey's treatment of technology as incorporating methods
>
> of intelligent inquiry and problem-solving in all domains of human life.[579]

Again, this study has provided the following exemplars: 1) Jane Addams, Ellen

Gates Starr and the Hull-House Settlement and Museum, 2) the World's Fair (1893

World's Columbian Exposition), and 3) Albert Barnes and the Barnes Foundation. John

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[578] "Technology + Design = Big Plans!" OMSI. http://www.omsi.edu.

[579] Johnson, *Morality*, 228.

Dewey was a thread tying together all three exemplars and their civically minded approaches.

These exemplars, which were discussed in Chapter III, served to answer RQ2: How have material enactions of a curational approach been utilized by various civic (affairs and engagement) innovation institutions in the past?

Curation as Moral Knowledge/Imagination: What Is Media? (2016)

Curation is the enactment of moral knowledge and imagination, through the remaking of experience, as rhetoric. To enact this theory-practice, I co-organized with Janet Wasko a curational interdisciplinary inquiry from April 6-8, 2016 at the University of Oregon in Portland at the sixth annual "What is...?" conference-experience theme on medium and media. The "What is Media? Experience • Exploration • Emergence" began to answer the question of significance and ethics for future generations.

The values and moral philosophy of the directors in the conceptualization and implementation of the conference-experience were based on a cooperative and collaborative aesthetics, ethics, and design—emergence. This was coupled with a research-centric focus on a critical, transdisciplinary inclusiveness. The event

- challenged traditional notions of media (cinema, television, journalism/press and the freedom of expression, industries/production, audiences, finance, information communication technology, archives, law, autonomies—independent film/pornography, organizations, sound, staples) noted in Chapter II;

- engaged emergent media (transmedia, science and technology studies, virtual embodiment, embodied virtuality, virtual reality/augmentations, online games, and new materialities of metatechnology/bio-tech, transtechnology/speculative design, food, automation, installation art/assemblages, remediation, and makerspaces) in Chapter IV;

- simultaneously involved issues of history/genealogy, philosophy, literacy, ecosystems, communities, social issues, materiality, gender/diversity/equity and intercultural concerns, developing countries, info-politics, environmental and ecological habitats, and contemplation;

- and most significantly embodied in the interpretive multiplex of mediums, meanings, and relationships of a curational mode of inquiry—as repair and healing via music (places, spaces and traces).

Exhibition: HABITATS

In conjunction with the conference, I also curated (along with co-curators Jeff Jahn and Cris Moss) the month-long *HABITATS* exhibition.[580] It was a group exhibition featuring installation artists who utilize emerging technology to assist in reconceptualizing media from environmental, ecological, and systems approaches. Utilizing various techniques and platforms, *HABITATS* stretched the imaginations of participants to envision "spaces, places, and traces" of what media have been and can become. The exhibition emerged at the University of Oregon in Portland's Light Court Commons, in collaboration with the White Box Gallery. This participatory experience

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[580] "Exhibition," *Habitats*, University of Oregon in Portland, Light Court Commons in collaboration with the White Box, http://jcomm.uoregon.edu/whatis/media/habitats.

engaged artist-artifact-audience as a process of meaning-making and discourse. As such, art was understood as a medium of communication and communication as a medium—or environment—of art. The artists cultivated their idiomatic hives/swarms/flocks/packs, and their mediums were enacted as *HABITATS*.

The group show included installations from filmmaker-artist Lynn Hershman Leeson, Michael Salter, along with Anne Blackburn, Modou Dieng, Laura Fritz, Damien Gilley, Agatha Haines, Matthew Henderson, Wade Larsen, Brenna Murphy, Tabitha Nikolai, John Park and John Bellona, the Portland Immersive Media Collective, Crystal Schenk, and Adam Simmons. Hershman Leeson was also featured at the event's "Experience" at the NW Film Center in the Portland Art Museum. The exhibition clarified a 21st Century awareness—the expectation of change. It explored communication and the synonymous relationality of media and technology that defines and opens up the worlds in which we live.

Emerging issues in the show included the re-pairing of false dichotomies (pairs) between nature/culture, conceptual/physical, analogue/digital, map/territory, and extension/amputation. Along with these issues were ones related to protected species, landscapes of flora/fauna, poverty, health, upcycling, and artificial intelligence. These themes were integrated through the lenses of text, painting, sculpture, multimedia, projection mapping, designed environments, and site-specific works.

Additionally, the conference featured two panels related directly to the exhibition. The first dealt with *curation*, featuring curators and directors from the Jordan Schnitzer Museum of Art (Jill Hartz), the Portland Art Museum (Sara Krajewski), PORT (Jeff Jahn) and White Box (Cris Moss). The second opened a immersive discourse surrounding

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installations. Artists from the *HABITATS* exhibition (Modou Dieng, Michael Salter, Agatha Haines, Laura Fritz, and Brenna Murphy) discussed works highlighting and expanding qualities and characteristics of the show.

In the publicity materials, the exhibition was conceptualized as follows: "Our environment is a medium that continues to expand with the integration of the arts, sciences, and humanities *with* communication. In hacking materiality, virtuality, and hybridity, *HABITATS* reveals our developing contemporary condition in *an ecology of inquiry*."

Ecologies of Inquiry

In addition, interviews were conducted on site with conference plenary participants in a cross-disciplinary ecology of inquiry, in which they were asked to respond to questions.[581] Below are selections from some of the most noteworthy responses:

What Is Media?

Two things. The old way is to communicate, and I think we are getting a little bit behind that. The new way in which media is shaping the world, is actually in terms of our constructing environments within which we meet. So we never meet on TV, but we meet online. And that's a big difference. That's the difference between the old mass media and the new mass media; they create an environment for us.—Luciano Floridi

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[581] Interviews conducted at the *What is Media? Conference-Experience,* April 6-8, 2016. Multimedia Journalism Masters Program Co-Director and Senior Instructor at the University of Oregon, Sung Park, and his undergraduate students from his class conducted the interviews for this section.

So for me, media is a complex system of relationships that produces expressions and understandings, which are apprehended, discarded, embraced by individual human beings and social collectivities within the context of a large scale economic, social, political and cultural world system.—Eileen Meehan

Media to me is part of an interesting set of processes, and rather than talk about media I tend to talk about processes of mediation, processes which are cultural sociological technical and out of these processes, through a series of cuts and enacted both by human and non-human agents, emerge what we conventionally know as media. However, the conference itself has presented a much more expanded understanding of media in which we humans are also considered media. We participate in the processes of mediation. So this media for me are this convoluted process of mediation out of which something emerges, something happens, something stabilizes.—Joanna Zylinska

What Is the Future of Media?

…it's in what I call "the next internet," which is a combination of convergence of cloud computing, big data analytics, and the internet of things, and what this- its significance is that for the first time in human history, media become ubiquitous. That they are embedded in walls, in thermostats, in human bodies, so that media, increasingly, are no longer objects, external to human begins and society, but are integral component of humans and their central arrangements. That makes their

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consequences much more powerful than they have heretofore been, because in essence, you really can't turn them off any more.—Vincent Mosco

An RFID tag lets you track a package through space. But what happens if that RFID tag sends information to the screen in your pocket? The screen in your pocket perhaps sends a screen shot to an aggregation of screen shots at a bank somewhere. You see how this starts to entwine? This is the most interesting thing to me about media right now is that media are integrating with our physical lived experience and they are helping to integrate us ever more closely into the institutions that dominate our lives, and yet we have no way of thinking about that because our experience feels like an ever increasing individualization of our pursuits. This is the great irony.—Fred Turner

… bio-mediations points towards thinking about media in biological terms. And the term bio-mediations signifies on the one hand that media, themselves, are living. They are composed of living cells, of- the planet itself could be seen as participating in those processes of mediation. On the other hand it points to the fact that life as we know, as part of bio, is also undergoing process of mediation. So the future of media is biological. Life itself will become even more mediated. Life perhaps has always been mediated, but I think the current intensification of changes, both at the nanoscale and kind of large cosmic scale, brings to the fore that condition of media as the process of bio-mediation. —Joanna Zylinska

Are Aesthetics, Ethics, and Design Important to Media?

…I'm concerned about how old traditional ethical paradigms are being used, applied to a situation which is rather new, and which perhaps calls on us to redefine our traditional paradigms, including: what counts as life, what counts as values behind the life, who is the human and who is the non-human, how the relationship between the human and the animal, the animal and the plant is being established but also is being redefined.—Joanna Zylinska

I think we underestimate how important ethics and aesthetics may be. Because sometimes we concentrate on content rather than the bigger picture. So the analogy I would have here is of the Russian dolls, you know, smaller and than bigger and bigger and bigger. The biggest doll is actually ethics. But because it's so big we don't see it. It doesn't mean it doesn't constrain every other doll that we actually see within it.—Luciano Floridi

How Can Media Care For and/or Repair (Curate) Our World?

It seems to me that media are instruments, like any other tools, that can achieve positive or negative outcomes. Technologies are nothing more than congealed social relationships. And if we come together as people and chose to use these instruments for positive social benefit, we can achieve goals that will advance our social and human wellbeing. So we can use technology either to hasten the arrival of massive climate change or we can halt it in its tracks using technology, but it has to come out of the concerted effort of human beings who embed their ethics,

their morality, and their desire for positive social change in technology. —Vincent Mosco

The human is mediated and the human's relationship to other agents, other beings, other entities, you know animals, plants, stones, and as part of this, it's also an attempt on my part to cut the human to size a little bit. To see that human is mediated and to also take responsibility for the processes of mediation that we enact and of which we are part.—Joanna Zylinska

I see new possibilities for cross-disciplinary synergy, as well as, fostering new experiences for the future. In deeper reflection, like Hull-House and the Barnes Foundation in Merion, I see no reason why the distinctions between the scientific laboratory, museological and academic learning environments cannot be cultivated together to "provide for those who are particularly interested in problems" to work on a pluralistic, melioristic, and hopefully sympathetic account of curation in the 21st century. Curation enacts aesthetics, ethics, and design approaches simultaneously as a (socio-technical systems) repair of pragmatist values in communication as a discipline.

This section on "Curation and Moral Knowledge/Imagination" responds to RQ4: How does the political-economic structure of these material enactions of various curational approaches reflect, remake, and repair societal values? These comments are deep reflections in alignment with a quote from John Dewey in *Democracy and Education* published in 1916.

The imagination is the medium of appreciation in every field. The engagement of the imagination is the only thing that makes any activity more than mechanical. Unfortunately, it is too customary to identify the imaginative with the imaginary, rather than with a warm and intimate taking in of the full scope of a situation.[582]

Curation as Becoming

It is worth nothing that curation is my critical mode of dynamic inquiry in response to philosopher Colin Koopman emploring us that

we should now start envisioning our practices of critique and inquiry as processes whose forms are temporal and whose contents are historical. This is a transitionalist [reconstructive] conception of philosophy … a transitionalist philosophy … that can meliorate the historical-temporal streams in which we fragile humans ever flow forth. We bear the burden of our witherings as we are witness to our blossomings. We might allow ourselves not to neglect the transitions by which we become.[583]

Curation as Medicine

I understand curation in this way as, a lens to understand Dewey's, process of inquiry. By creating the conditions to making things better, to making things whole, to bring them to their fulfillment, we require a notion of curation, where it is repair, it is

- as a diagnosis (deeper exploration; a compassionate concern for others; as a thoughtful reflection on experience),

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[582] Dewey, *Democracy and Education*, 244.

[583] Colin Koopman, *Pragmatism as Transition*, 232-233.

- as a prescription (as medication)

- as a treatment,

- as a cure (as a remedy).

But here is where I deviate at the last moment, I conclude with a grand departure—curation as "not one of remedy; [but instead] it is one [again] of constructive education."[584]

> Mr. [F. Matthias] Alexander's teaching stand on a totally different plane from those obtained under the various systems which have had great vogue until they have been displaced by some other tide of fashion and publicity. Most of those who urge the claims of these systems point to "cures" and other specific phenomena as evidence that they are built upon correct principles.[585] Even today,[586] doctors have discouraged the appeal to "cures" or to any other form of remarkable phenomena.[587]

Care and Repair as Inquiry

Steven Jackson states that repair is a vital process and approach to media and communication research as well as an environmentally informed approach to waste management of information communication technologies.

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[584] John Dewey, "Miscellany: Introduction," in Vol. 15 of *The Middle Works, 1899-1924*. (Charlottesville, VA: InteLex Electronic Edition, 1923/2008), 315. [Originally published in F. Matthias Alexander, *Constructive Conscious Control of the Individual* (New York: E. P. Dutton and Co., 1923), pp. xxi-xxxiii.]

[585] Ibid., 312.

[586] R. Alta Charo, "On the Road (to a Cure?)–Stem-Cell Tourism and Lessons for Gene Editing," *The New England Journal of Medicine* 374 (10) (2016): 901-3.

[587] Ibid., 313.

repair: the subtle acts of care by which order and meaning in complex

sociotechnical systems are maintained and transformed, human value is preserved

and extended, and the complicated world of fitting to the varied circumstances of

organizations, systems, and lives is accomplished.[588]

Additionally, remediation is not merely the re-mediatory acts, as in Bolter and

Grusin, remediation theory.[589] It is, in addition, an integrative view, an ecologically based

approach for communication (in its widest sense) of how we can constructively educate

each other by recognizing that deep care, re-pairing of conceptual dichotomies in our

thinking, the even more embedded repair (or remediation) of the environment, and most

especially the body as an environment/medium. This is an important area for future

research, to foster sympathetic moral knowledge and repair as technologies/media of

curation.

This now leads us to the dissertation's conclusion, Curational Communication

Research as emergent theory-praxis. As an emergent pedagogy, this reorientation,

melding, and renavigating/reweaving of techne, poiesis, and praxis is a self-reflexive

enaction, which yearns for new creative situations and endeavors.

Conclusion

This is the way of life … we were once forest people for hundreds of

millions of years. … We're losing the perspective of the synergism and

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[588] Jackson, "Rethinking Repair," 222.

[589] J. David Bolter and Richard A. Grusin, *Remediation: Understanding New Media* (Cambridge, MA: MIT Press, 1999).

the symbiosis of the ecosystem that's given us birth. I think that it's wise

for us to go full circle and re-investigate.

—Paul Stamets[590]

Over the course of this dissertation, I have reconstructed major highlights of the

past century and the confusion over the definitions of what is/constitutes a medium,

media, and communication that have changed so swiftly and radically, especially in the

past decade and half, that even leaders in "the media" have been perplexed. Students in

journalistic curricula are working diligently to navigate these transforming and

unchartered waters. In my courses and in the analyses covered in this dissertation, I

encourage students and colleagues to engage in cultivating rigorous skill sets for a 21st

century applied philosophy of communication and media. These skills have been

coevolving with new emerging environments and in many cases require agile and

comprehensive approaches to language, especially via conceptual framing, prototype

analysis, and computer programming. In this way, what are understood as

mechanistic/quantitative levels of analysis, for example through data journalism and

visualization and drone journalism, require an ecological level/frame embedded in a

moral imagination.[591]

As noted, we have inherited a certain notion (ontology) of medium, media, and

communication and the ways in which it was traditionally conceived of in newspapers,

radio, TV, and cinema. It has confused our ways of communicating by not

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[590] Paul Stamets, "Mushrooms as Medicine," *Exponential Medicine*, October 15, 2015. https://www.youtube.com/watch?v=7agK0nkiZpA. Additional information about Singularity University's Exponential Medicine conference is available at: https://exponential.singularityu.org/medicine.

[591] See Chris Russill's forthcoming book on "Earth Fix." Also see Chris Russill, "Planetary Pragmatism? A Response to François Cooren," *Language Under Discussion* 2(1) (2015): 27-34.

problematizing organism–environment interactions and their extended networks of relationships. The traditional view of communication over the last century (including dialogues from the Lippmann-Dewey "debate," the development of cybernetic approaches, including the Shannon-Weaver model, to James Carey's transmission, and ritual views to the quantum leaps in digital media) needs to include a material, embodied/corporeal/analogue notion of physical information and primary documents as media.

Communication and Curation: Embodied Meaning and Praxis

This dissertation is my first attempt at a retheorization of communication theory as a fundamental paradigm shift that includes my contributions of:

1. a compendium (See Chapter II and IV), a glossary that integrated conceptual frames and physical processes;

2. experientially-based civic environments that colocate technology/media, environment/medium, and their practitioners in a unique and provocative way, a mode of inquiry not simply as understanding or description only, but about action, participation, and association (See Chapter III);

3. a timely opening of the possibility of the convergence of concepts and actions that were conceived of as impossible metamedia (See Chapter IV), moving from habit to empowerment; and simultaneously

4. remediating some outmoded frames of aesthetics, which fail to recognize the EEEE ways media interface/permeate each other (See Chapter V) in real-time and always-on culture.

Curational Inquiry as Speculative Instrument

We require speculative instruments, probes for how we cannot merely feedback on the circumstances we are faced with, but how we can feedforward to unforeseen morally imaginative emergent opportunities.

Throughout this dissertation I have articulated a pragmatist metaphysics, the foundational (philosophical) assumptions where the aesthetic, pragmatic, scientific (cognitive, biological, environmental), artistic, musical, and ecological are integrated in the study of medium and media. In combining these skills, my hope is that it leads to something like a multidisciplinary degree in curational inquiry, where students can connect how an EEEE view involves values, techné, and poiesis (morals, technology, and art) for what embodied meaning and praxis are to communication along with its implications.

In picturing media and communication differently, we are led to the strings of words in this dissertation via a glossary and texts, models via pragmatism, images via visual, auditory, and conceptual metaphors, and concepts that are fundamentally different in that they are now recognized and as such reconnected. This integration-ism enacts a reconstruction of communication in a pragmatist sense.

Media as Natural Amalgamation

The field of communication is beginning to emerge from recent decades of digital immersion and approaching, what I feel is a biologically-inspired paradigm shift of views, practices, forms of judgment, institutions, experimental communicative practices, and what are/constitutes significant phenomena. In this rethinking of fundamental

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concepts, how we relate in a more expansive mode of dynamic, reconstructive, and coevolutionary inquiry, I hope this work moves our interrelated fields beyond habituated narrowly focused representationally based modes of thinking. In the following quote by Dewey, I substituted my notion of *natural media* for science:

> [Media] through its physical technological consequences is now determining the relations which human beings, severally and in groups, sustain to one another. If it is incapable of developing moral techniques which will also determine these relations, the split in modern culture goes so deep that not only democracy but all civilized values are doomed. Such at least is the problem. A culture which permits [media] to destroy traditional values but which distrusts its power to create new ones is a culture which is destroying itself.[592]

Now that we have an account of embodied aesthetics and ethics, I hope this shift is clearer. In utilizing the resources of the past and present together, my goal was to bring American Pragmatism and a variety of applications into dialogue to foster future metadiscourses.

There were century-old resources that now have been reconstructed via an organizational notion of curation. This dissertation brought these resources to the foreground, not by focusing on them but instead probing and feedforwarding how other resources have been parallel and complementary—especially in other disciplines. Most importantly, it is how they all carry us along with (again, not beyond) where we are toward an experientialist amalgamation.

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[592] John Dewey, *Freedom and Culture*, in Vol. 13 of *The Later Works, 1925-1953* (Charlottesville, VA: InteLex Electronic Edition, 1939/2008), 172.

This occurred through the re-pairing of nondichotomous value pairs and the integration of communication, art-science, culture-experience, media-technology, medium-environment through the lens of an embodied, materialist aesthetics, ethics, and design. Curatorial and pedagogical approaches reviewed and analyzed throughout this dissertation recognizes a re-emergent notion of *curation*—caring, healing, and repairing ourselves and our world.

From theoretical, methodological, empirical, and moral points of view, this can be understood through its implications in a variety of fields:

- journalism (reporter-editor; from participatory journalism to citizen journalism and on to civic media and solutions journalism),

- science (scientist-citizen),

- art (artist-curator; artist-audience),

- music (composer-conductor; musician-audience),

- computation (user-system administrator),

- cinema (director-producer-live[593]),

- performativity (participant-facilitator), and

- emerging integrated material-representational alchemy (via virtual embodiments and embodied virtualities).

Finally, I see my research moving in the coming years in alignment with the transcription, translation, and transformation of "spaces, places, and traces" within

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[593] Sandy Hall, "Francis Ford Coppola tests concept of live movie-making with UCLA students, faculty Production by famed director takes place at UCLA School of Theater, Film and Television," *UCLA Newsroom*, July 25, 2016. http://newsroom.ucla.edu/stories/francis-ford-coppola-tests-concept-of-live-movie-making-with-ucla-students-faculty.

biology, environmental science, and language eschewed via biomedia, bioart, biosemiotics, and biocommunication.

What does this mean for a more expansive frame of curation—re-pairing and reconnecting people, conceptual dichotomies, along with "repairing the world" (in Hebrew—"Tikkun Olam") materially? It is understanding technology and in turn media as a form of moral knowledge not only as virtue but *virtú* (think of the World's Fairs and Expos). Imagine the emerging platforms and modes of inquiry we are beginning to take for granted increasingly utilizing the "curation" of data, its management, and its attempts at an ethics of ecological imagination.

For instance, are the Expos since Aichi 2005 installed new environments, new habitats, new technologies? The four subsequent Expos after Aichi continued to have sustainability-related themes, including Expo 2008 (Zaragoza, Spain) "Water and Sustainable Development," Expo 2010 (Shanghai, China) "Better City, Better Life," Expo 2012 (Yeosu, Korea) "The Living Ocean and Coast," Expo 2015 (Milan, Italy) "Feeding the Planet, Energy for Life." One upcoming theme that continues this trend is next year's Expo 2017 (Astana, Kazakhstan) "Future Energy," while Expo 2020 (Dubai, United Arab Emirates (UAE) appears to be moving in an even more integrative fashion with "Connecting Minds, Creating the Future."

Ecology as Curation

Curation as ecology as moral imagination is the tangible circumstance for cultivating a reparative and restorative approach to the world, whether through ecological and/or sustainability-based projects like remediative technologies, regenerative medicine,

or architectonic revisioning of our world. We must begin our studies with an acceptance

of the fusion of analogue-digital-physical-virtual (metamedia) as a truly emergent hybrid

landscape. Olafur Eliasson with the image on the screen of "triple ripple" (from the

Städtische Galerie für Gegenwartskunst, Dresden, Germany) intones[594]:

> Responsibility … means really being in your time. How can one be a part of the
> time in which we're living in? How can one be critical in a kind of way you
> could've been a hundred years ago ... it seems to me that being responsible is
> more about introducing criticality by virtue of a coming together rather than
> polarizing every argument into each other['s] opposites. There is a kind of critical
> potential in sort of suggested responsibility lays in the kind of ways that things
> come together."[595]

Concluding Thoughts

In bridging tools, techniques, technologies, and technics can we uncover,

discover, and recover patterns of artful living/life? How can we recognize the

acculturated assumptions about what a curator is, and how it can expanded to be

understood in embodied reflection (habitats: environmentally *and* ecologically)?

Again, I want to continue investigating how complexity and systems science

transcribe, translate, and transform our conceptualization of physical (natural) media as

an emergent biological interface along with (origin of "meta"), not transcenden*t* to, other

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[594] Olafur Eliasson. Triple Ripple, Städtische Galerie für Gegenwartskunst (Dresden, Germany, 2004). Photo: David Brandt. http://olafureliasson.net/archive/artwork/WEK100855/triple-ripple#slideshow.

[595] Jacob Jørgensen, Mads Jørgensen, and Henrik Lundø, *Olafur Eliasson: Space Is Process* (Princeton, NJ: Films for the Humanities & Sciences, 2010), 44:06-44:59. http://olafureliasson.net/archive/artwork/WEK100855/triple-ripple#slideshow.

phenomena. This mode of inquiry as pattern recognition takes into account how new technologies and, in turn, environments lead us towards worlds of enhancement, obsolescence, retrieval, and reversal in all modes of inquiry.

Go to the edge of your imagination. What comes after you've created your self-instantiation in the world (embodied identity and virtual agent avatar), you as place (embodied geospatial location/place), you are space (corporeal and virtual environments simultaneously), you are (on/trace) time. Areas for future study in communication include:

- the human body as an "communicative" ecosystem;

- biocommunication;

- bioinformation, biomimicry, biomedia, bioart, and bioencryption/biodesign;

- mending, like a garment, of regenerative medicine;

- restoring/fixing, in process, to re-store like a curator or archivist;

- reimagining, like a recipe, of extension to DNA sequence; and

- "kinship gardening," like the *emergent synergies* between plants, people, and the environment as mutualistic and symbiotic.

The implications and application of emergent media would include complexity studies, art-sports prosthetics (Aimee Mullins), dance (Merce Cunningham), and emerging curational communication research. [596]

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[596] For example: San Francisco Museum of Modern Art, *010101: Art in Technological Times* (San Francisco, CA: San Francisco Museum of Modern Art, 2001); Claire Bishop, "Antagonism and Relational Aesthetics," *October*, 2004, 51-79; Siegfried Zielinski, *Deep Time of The Media: Toward an Archaeology of Hearing and Seeing by Technical Means* (Cambridge, MA: MIT Press, 2006); Nicolas Bourriaud, *Relational Aesthetics*. Collection Documents Sur L'art (Dijon: Les Presses Du Réel, 2009); Sarah Cook and Curatorial Resource for Upstart Media Bliss, *A Brief History of Curating New Media Art: Conversations with Curators* (Berlin: Green Box, 2010); Steven Rand and Heather Kouris, eds., *Cautionary Tales: Critical Curating* (New York: Apexart, 2007/2010); Rudolf Frieling, *The Art of Participation: 1950 to Now* (San Francisco, CA: San Francisco Museum of Modern Art; in Association with Thames & Hudson, 2008);

This modified and remixed quote (circa 1924) is from Eric W. Allen (1879–1944), inaugural dean of the University of Oregon School of Journalism and Communication established in 1916, whose consummatory doctoral degree in philosophy is my *embodied reflection* for us all:

> **The _actual_ information** a [person] can possess at graduation is too slight **a thing** to count. The question is, Has [one] formed [systemic] **habits** that will make of [oneself], years later, a [person] of sound [ecological] knowledge, a straight [and nonlinear] thinker, a representative [and embodiment] of the best thoughts of [their] time, and **the companion** ~~either~~ _directly_ ~~or~~ [and] through the printed page **of the soundest thinkers of [their] generation**?[597] [emphasis added]

With humility, I offer a notion of curation that integrates the material and representational worlds along with values and ethics as an embodied morally imaginative experience. Valuing is unreflective and value does not drop down from the sky above. Habits are cultivated, but valuation is a mode of curating new possibilities where we can forecast and feedforward, bringing together the middle of what constitutes a melioristic

Julia Noordegraaf, Cosetta G. Saba, Barbara Le Maître, and Vinzenz and Hediger, *Preserving and Exhibiting Media Art: Challenges and Perspectives*. (Amsterdam: Amsterdam University Press, 2013); Peter Weibel, Ljiljana Fruk, Zentrum Für Kunst Und Medientechnologie Karlsruhe, *Molecular Aesthetics* (Cambridge, MA: MIT Press, 2013); John Durham Peters, *The Marvelous Clouds: Toward a Philosophy of Elemental Media* (Chicago: University of Chicago Press, 2015); Celina Jeffery, *The Artist as Curator* (Bristol, UK: Intellect, 2015); Jussi Parikka, *A Geology of Media* (Minneapolis, MN: University of Minnesota Press, 2015); Terry Smith, *Talking Contemporary Curating*, ICI Perspectives in Curating, No. 2 (New York: Independent Curators International, 2015); Lynn Hershman-Leeson, Peter Weibel, and Zentrum Für Kunst Und Medientechnologie Karlsruhe, *Lynn Hershman Leeson: Civic Radar* (Ostfildern: Hatje Cantz, 2016); Jussi Parikka, "The Container Principle: How a Box Changes the Way We Think," *Leonardo* (2016).

[597] Eric Allen: "The actual information a man can possess at graduation is too slight a thing to count. The question is, Has he formed habits that will make of him, years later, a man of sound knowledge, a straight thinker, a representative of the best thoughts of his time, and the companion either directly or through the printed page of the soundest thinkers of his generation." American Association of Teachers of Journalism, and American Association of Schools and Departments of Journalism, *The Journalism Bulletin* (Urbana, IL: American Association of Teachers of Journalism, 1924). See Thomas H. Bivins, *Within These Walls: Reflections on 75 Years of Journalism Education* (Eugene, OR: University of Oregon, 1991).

situation for metadiscourse/metalogue with emerging questions. We must remember to keep our research inquiries fluid—inclusive of even more disciplinary borders—in a closing and opening manner, reiterating a means ends-in-view approach for the work to be done to "curate" *LIFE* in the future. **This is *our* choice.**

We shall not cease from exploration

And the end of all our exploring

Will be to arrive where we started

And know the place for the first time.

Through the unknown, remembered gate

When the last of earth left to discover

Is that which was the beginning;

At the source of the longest river

The voice of the hidden waterfall

And the children in the apple-tree

Not known, because not looked for

But heard, half-heard, in the stillness

Between two waves of the sea.

—T. S. Eliot, *Four Quartets*

LIST OF EXHIBITIONS AND MUSEUMS

Exhibitions

- *HABITATS*, 2016.

  Artists: See Habitats section in Chapter VI.

  Curators: Jeremy Swartz with Jeff Jahn and Cris Moss.

  Location: Light Court Commons and White Box, University of Oregon in Portland.

- *Not Red But Green*, 2014.

  Artist: Per Kristian Nygård.

  Location: No Place gallery, Oslo, Norway.

- *Riverbed*, 2014.

  Artist: Olafur Eliasson .

  Location: Louisiana Museum of Modern Art, Copenhagen, Denmark.

Museums

- Jordan Schnitzer Museum of Art.

- Littman Gallery at Portland State University, Open Engagement.

- Portland Museum of Art (collaboration with the NW Film Center on an experience

  with filmmaker/artist Lynn Hershman-Leeson along with Harmonic Laboratory).

Research Spaces/Laboratories (not mentioned)

- AlloSphere at the California NanoSystems Institute, UC Santa Barbara[598]

- Berkman Klein Center, Harvard University

- Center for Spatial Systems Biomedicine, Oregon Health & Science University

- City Repair Project and the Village Building Convergence, Portland, Oregon

- Dorkbot PDX

- Graffiti Research Lab

- MIT Media Lab

- Oregon Country Fair, Veneta, Oregon

- Open Lab in NY

- Open Source Ecology Project

- UO CAMCOR

- UO META

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[598] "It's a place where you can use all of your senses" to find new patterns in data... "You can almost say researchers are shrunk down to the size of their data, immersed at a perceptual level." – JoAnn Kuchera Morin (Director/Designer, AlloSphere), Professor of Media Arts & Technology, Professor of Music, University of California at Santa Barbara. Trained as an orchestral composer and director of the school's Center for Research in Electronic Art Technology (CREATE).

The first tradition is *rhetoric* comprising the art of dialectic, persuasion, and dialogue.[599] Noteworthy figures are Plato, Aristotle, Kenneth Burke, and Sonja K. Foss/Cindy L. Griffin.

The second tradition is *semiotics* "foreground[ing] understanding rather than persuasion," introducing a second-order language of "sign, meaning, cognition, code, medium, and discourse."[600] Noteworthy figures in this tradition are: John Locke (founder of the modern concept of communication), Charles Sanders Peirce (communication as socially instituted), Ferdinand de Saussure (language as mutable and immutable), Roland Barthes (connotation and denotation), and John Durham Peters (blending semiotics with phenomenology).

The third tradition is *phenomenology* which "rejects any absolute distinction between objectivity and subjectivity."[601] Noteworthy figures in this tradition are: Edmund Husserl (bracketing–what we take for granted), Martin Buber (identity), and Hans-Georg Gadamer (difference).

The fourth tradition is *cybernetics* dealing with information flows and processing. It deals with "the paradoxical reflexivity between meaning and context, or message and metamessage."[602] Noteworthy figures in this tradition include: Claude Shannon and Warren Weaver (coding feedback information processing), Norbert Wiener (who coined

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[599] Craig and Muller, 123-125.

[600] Craig and Muller, 163.

[601] Ibid., 217.

[602] Ibid., 92.

the term, and his notions of kinesthetic), Gregory Bateson (double-bind), Niklas

Luhmann (autopoiesis) followed by Francisco Varela and Humberto Maturana.

The fifth tradition is *social psychology*, communication becomes a process of

social interaction, whereby interactions are viewed as individual or societal as *techniques*

and *social practices* themselves.[603] Noteworthy figures in this tradition are: Carl Hovland

(pioneer empirical methods), Charles R. Berger/Richard J. Calabrese (uncertainty

reduction), Albert Bandura (social cognition), and Marshall Scott Poole (small group

theory and emergence).

The sixth tradition is *sociocultural theory*, whereby "symbolic process ... produce

and reproduce shared ... patterns."[604] Noteworthy figures in this tradition include: George

Herbert Mead (social interactionism), Harold Blumer (symbolic interaction), James W.

Carey (communication as culture), Bruno Latour (ACT: actor network theory) Mark

Poster (post-structuralism and hegemony), and Elihu Katz and Paul Lazarsfeld (personal

influence).

The seventh is the *critical tradition*, where notions of *discursive reflection*

emerge.[605] Noteworthy figure in this tradition include: Karl Marx/Frederick Engels

(capitalism, ideology, and commodity fetishism), Max Horkheimer and Theodor W.

Adorno (culture industry), Jürgen Habermas (ideal speech), Stanley A. Deetz (discursive

closure), and Sue Curry Jansen (technocratic structure and internet-based mediated

technologies). Other major critical communications theorists are Stuart Hall, Antonio

Gramsci, Dan Schiller, and R.W. McChesney.

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[603] Craig, "Communication Theory as a Field," 153; Craig and Muller, 82-83.

[604] Craig, "Communication Theory as a Field," 144.

[605] Craig and Muller, 85-86.

APPENDIX C

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