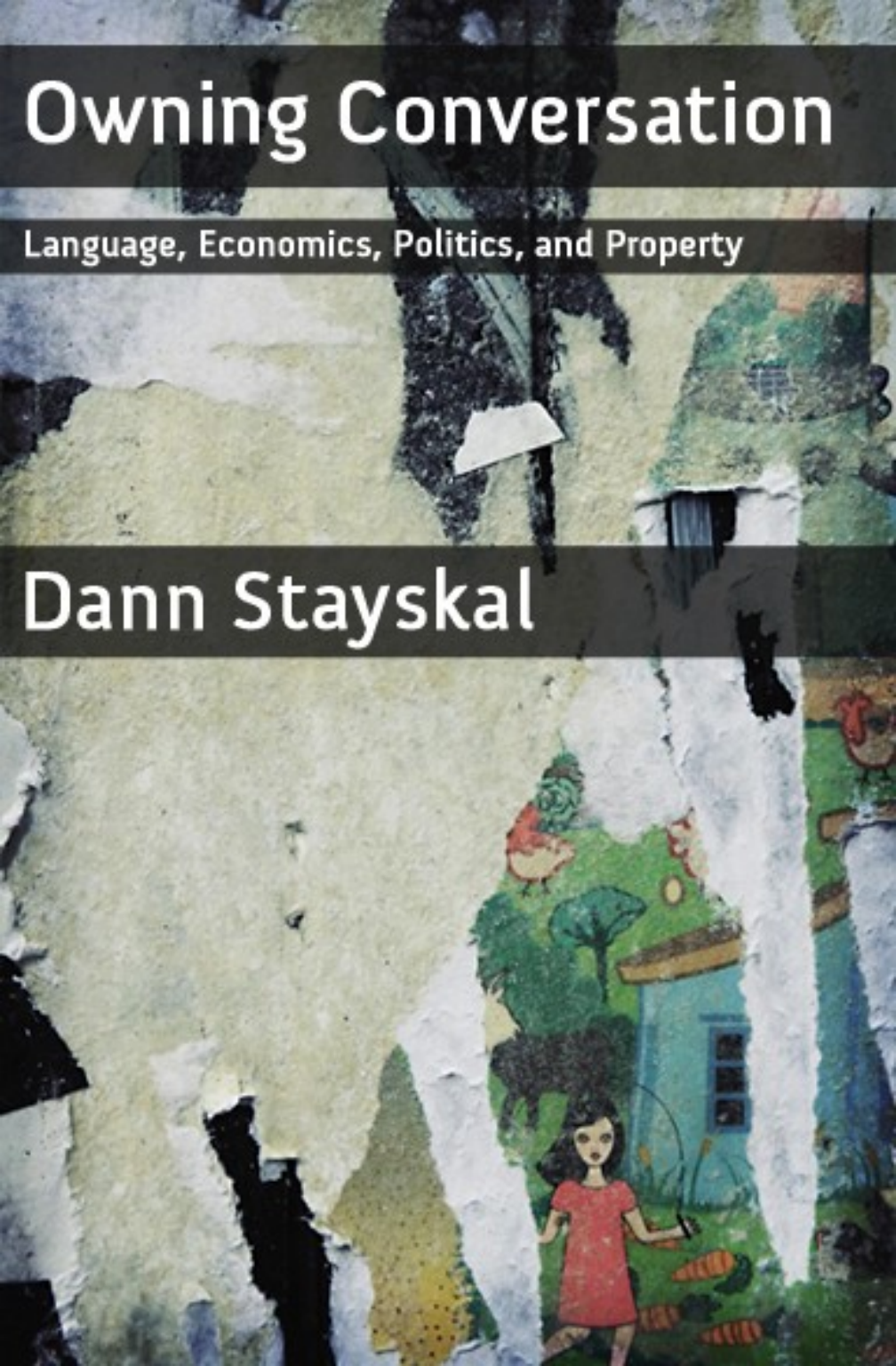
Owning Conversation

Language, Economics, Politics, and Property

Dann Stayskal



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Digital Edition

For Kristin vanNamen, Cindy Atha-Weldon, and Ken Zuercher,

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Preface

During my undergraduate studies at the University of Texas at Arlington, I had eight different majors, countless minors, and dropped out twice. When I decided to return, I joined the interdisciplinary studies group—a major for those of us who wanted to study a very specific topic not otherwise available as a major. In my case, I studied computational linguistics and artificial intelligence, taking coursework in computer science, linguistics, psychology, math, philosophy, and sociology.

When choosing a thesis topic, I didn't want to limit myself to just a few disciplines, and I wanted it to be accessible enough that others in my group could offer meaningful criticism. The problem I settled on to tackle in my thesis is property theory—with specific treatment to intellectual property. This, for me, is absolutely grounded in artificial intelligence: if you try to teach a computer to understand the phrase "trees have leaves," it's considerably easier to describe "trees" and "leaves" such that the computer could recognize them when presented than it is to express to a machine what "have" means. Why is that?

Addressing this question, this book contains the text of my undergraduate thesis.

Abstract

Language creates culture while culture creates language. In a democratic state, law should reflect the structure of culture before dictating it. In America, intellectual property law reflects only a small subset of the expressive possessive forms in language. Furthermore, this law is modeled after physical capital, which shares few commonalities with its social analog. Intellectual property in the digital millennium erodes a natural right of the human condition: conversation. In order for humanity to remain humane, property must retain propriety. This paper analyzes the problems caused by the current structure of intellectual property in America, and outlines solutions through an interdisciplinary approach.

Introduction

By regarding information as tangible property, the American government and economy endangers the natural right of communication. This arises from political and economic biases along the semantic axes of creation in language, and from the function of information as both an expression and a conversation. Language and culture create each other as a substantive function of the human condition. This forms the means by which individuals construct their realities through their societies (Berger & Luckmann, 1967). This socialization is both a natural and universal human right, but is not universally protected as such by the American government. The U.S. Congress has enacted laws restricting the flow of digital text disproportionate to their simultaneous restrictions of other forms of expression (National Humanities Alliance, 1997, p. 571). These barriers of trade are based on the structure of physical capital, but inhibit the construction of culture when applied to social economic relationships.

Since intellectual property, those creative expressions to which a creator has protective natural rights, is grounded in social rather than physical capital, the structure of regulation

governing this trade should adapt accordingly. In America, industrial giants regularly use the asymmetries in this trade law to suppress the publication of scientific research (Samuelson, 2001, p. 2028). Furthermore, patents on plant seeds, genome segments, and software processes have caused famines and sparked international firestorms over the validity of these rights. When discussing rights, it is important to make the distinction between the two bodies of political theory governing each type of right: natural rights, also called "moral," "unalienable," or "innate" rights such as the right to life and liberty are those which are due to humanity solely as a function of the human condition (Marshal, 1992, p. 661). Positive rights are those that are granted by law towards the structure of human society (p. 661). Similarly, Jean-Jacques Rousseau outlines a distinction between forms of *possession* and forms of *property*:

> If we are to avoid mistakes in weighing the one side against the other, we must clearly distinguish between *natural* liberty, which has no limit but the physical power of the individual concerned, and *civil* liberty, which is limited by the general will; and we must distinguish also between *possession*, which is based only on force or 'the right of the first occupant,' and *property*, which must rest on a legal title. (1968/1762, p. 65)

Rivers of ink have poured into the fields of American linguistic,

economic, and political discourse over rights to intellectual property, producing few observable fruits for their efforts. The current discourse focuses on information as physical property, despite the nature of information as a relationship mirroring conversation. Because of the biases in the existing discourse, and shortcomings in the epistemology, ontology, and methodology of each discipline, the current discussion has failed to produce a holistic model to ameliorate the infringements of natural rights by intellectual property abuses. Through these failures, single-disciplinary approaches have proven incapable of addressing of the emergent problems, and show no promise to do so in continued mutual isolation. Because of the social ramifications of disciplinary failures, and the immutable complexity of the subject, the structure of this topic is highly amenable to interdisciplinary analysis (Repko, 2005, pp. 88-90). The first cornerstone of the interdisciplinary approach is developing an understanding of the perspectives of each discipline.

Literature Review

Intellectual property is the simultaneous concern of economics, sociology, political science, finance, anthropology, psychology, linguistics, computer science, business, and law. These disciplines have all addressed the issue in some fashion, but three stand out in methodology, epistemology, theory, or

perspective. Linguistics, though lacking any theoretic provision for social action or qualitative judgment, provides the methodology and theories necessary to give actionable substance to conversation in social relationships and social markets. Economic theories are best fit to address questions of markets, capital, and production – regardless of the currencies through which trade takes place (Repko, 2005, pp. 57-58). Political science addresses the structure of power within the cultures that emerge from these linguistic behaviors and economic markets (Repko, 2005, p. 58). The perspectives of each of these disciplines are required for a holistic approach to be effective. Through the integration of these disciplines, the paths become clear to the amelioration of involuntary human exploitation through modern economic practices. When information is considered property, conversation becomes property. An effective model of intellectual property must then begin with the study of linguistics, the discipline that most accurately reflects the structure and use of human language.

The epistemology of linguistics is grounded in a reflection of predictable, measurable, observed patterns in human language, using a rationalist approach. Its methodology restricts it from objective social judgment, seeing such as an unnecessary bias in research. Linguistics does not dictate how language *should* act, it simply reflects on how it *does* act (D. Silva, UTA Linguistics 2301 lecture, Fall 2004). Because of this drive

towards objectivity, the study of linguistics serves as an anchor to the study of intellectual property, shielding its observations from unnecessary bias. The methodology of linguistics provides a structure for obtaining and systematically analyzing texts, utterances, and discourse for complementary and contrastive traits, and then segmenting those traits into patterns observed in the language. Whereas complementary traits are those that can co-occur in a word, phrase, clause, or utterance, contrastive traits are those that cannot (Bickford, 1998, p. 20; Burquest, 2006, p. 38; Clark, Yallop, & Fletcher, 2007, p. 372; F. d. Saussure, 1983, as cited in Chandler 2002, p. 18). The most salient borders between language and property are those of relational expressions. Because of this, the review of linguistics literature concentrates on the structure and use of genitives (Allen, 1964; Barker, 1998; Katz, 2001; Kempchinsky, 1992; Lichtenberk, 2002; Shumaker, 1975), the expression and conversation of information, and the rights and responsibilities of communication. Though the surface forms of expression frequently blend in their communicative environments, semiotics and discourse analysis further illuminate the relationships between fixed expression and fluid communication (Chandler, 2002). Conversation creates relationships between conversants that closely parallel many features of economic markets. Because of these parallels, a holistic understanding of intellectual property must account for the behaviors of these markets in the

context of social and attention capital that communicators exchange through these acts of conversation.

Economics represents the study of personal and corporate interactions through market and social behaviors, with theories designed to model behaviors in the presence of supplies, demands, and markets. The economic ontology presumes that human behaviors are purely rational, which is reflected in its mathematical epistemology (Repko, 2005, pp. 57-58). This rationalist ontology "has served economics well, providing a coherent framework for modeling human behavior," although a branch of behavioral economics "argues that actual human behavior deviates from the rational model in predictable ways" (Levitt & List, 2008, p. 909). Since human decision-making behavior is driven simultaneously by emotional and rational constructs (Ariely, 2008; Damasio, 1994; Kahneman, 2003; Kahneman & Tversky, 1979), the rationalist economic ontology fails to account for the presence of emotional factors that weigh into human decisions in social markets. While rational economics effectively models the behaviors of physical markets, behavioral economics are needed in order to understand social markets. Behavioral economics is a young sub-discipline, and has so far produced "a collection of interesting insights" rather than a "unified theory" (Levitt & List, 2008, p. 910). The current shortcomings of behavioral economics are mirrored in the youth of its form of capital.

All markets share a set of common traits: supply, demand, and currency. In the relatively young field of *social capital* theory (La Due Lake & Huckfeldt, 1998; Savage & Kanazawa, 2004, p. 504; Sabatini, 2005, p. 7), which this paper describes contextually within a model of social economics, human interaction provides analogs to these traits in the form of knowledge and reputation, relationships and drives, and the "currencies" of attention, and trust in social markets. These social markets don't follow the same rules as physical markets (Kahneman & Tversky, 1979). These market traits do not form perfect analogs to their tangible economics counterparts, but blend well with multiple forms of linguistic analysis, whose aim is to understand why and how people and societies communicate as they do. Speech has never been regarded as completely free, in an economic or political sense. Legitimate forms of prior restraint control hate speech and defamation, balancing the underlying freedom of expression to illuminate the differences between personal and social ownerships of a communicative act (Matsuda, 1998). Economics and linguistics, when integrated, form a more complete understanding of why sociolinguistic markets behave as they do and which aspects of those markets require or forbid government regulation towards the protection of the human condition. Because of this integration, the review of economic literature concentrates on the structures of physical and social economic systems, the nature of regulated and free

markets, and the societies of information and property. This economy for attention, while not new, is made more prominent in American-style capitalism through the decay of public spaces. Through the "built, textural, and figural environments" (Agger, 1989, p. 23), the loss of perceptual distance that emerges threatens critical culture, but is axiomatic to the construction of *digital* culture and economics through the merging of digital spaces, economic attention and online language. Because of this, the future of critical culture lies in the valuation and attention and regulation of digital spaces. The economy of intellectual property is inexorably based in a new sociology of networked behavior (Castells, 2000, p. 693), requiring a new perspective on political science to balance these struggles for economic power in the digital millennium.

Political science shares a rationalist assumption with various other social sciences (Repko, 2005, p. 58), which causes the same epistemological disconnect as with economics: human behavior is not entirely rational, causing the theories based on that assumption to be ill fit to a fundamentally social problem. Political science concerns itself with law and the balances of power between social and economic entities, though, which yield important perspectives to a problem largely emergent from the biased interplay between economics and the law-making process. Consequently, this literature review on political science concentrates on the current structure of intellectual property law,

the establishment of public spaces, and the regulation of attention markets. Public spaces are tantamount to axiomatic of the democratic process through an unfettered marketplace of ideas, which is grounded in the natural right of free expression. These public spaces have eroded through myopic intellectual property legislation, which in turn threatens the free exchange of attention through natural, social behaviors. In order for attention markets to flourish in digital and offline spaces, some measure of government regulation is required to protect attention “buyers” and “sellers” from mutually exploitative practices.

Purpose of This Book

The purpose of this paper is to outline and justify necessary and sufficient regulations on intellectual property and its underlying social markets by constructing an interdisciplinary model of the sociolinguistic behavior of these markets as conversation. This begins by discerning the nature of socioeconomic balance between the creators and consumers of information as an analog to property. This model will illuminate the fundamental conflicts between personal and social interests, and the daily social and economic compromises required of individuals in order to function simultaneously as a free will and a member of a society. Through a detailed analysis of key theories and contemporary research in the salient disciplines, this

paper integrates a more holistic perspective on intellectual property than the unblended sum of its parts. The model guides citizens and social activists of America to more constructive sociopolitical behaviors. Purposeful information requires a context, though, against which to compare the observations and theories proposed. This background serves as a baseline of the current state of intellectual property and attention markets, upon which to architect social action.

Background

General Development of Problem

Abuses of intellectual property frequently emerge from a widespread misunderstanding of the nature of public and private spaces, goods, and relationships. The three major languages spoken in America are all able to semantically distinguish between ownership and membership forms of creation, though this ability is likely present in all languages (Aristar, 1991, p.1). Furthermore, language distinguishes between communicator and medium through the study of discourse and semiotics. This human facility for language creates human culture, underscoring the natural right to free expression through the construction of sociolinguistic spaces. Modern societies have inverted the walls between these private and public spaces (Mitchell, 2005, p. 50). Through the legal monopolies on expression and the privatization of a society's means of production, recent legislation as altered those public spaces that once promoted the common welfare toward the sole promotion of corporate interests. These "new intellectual property rights enclose the biological, intellectual, and digital commons" as an externality of global corporate capitalism (Shiva, 2005, pp.3-4), through which

common goods are increasingly used for private gains to the exclusion of the right of others to do the same. Public goods exist for the benefit of a community, whereas private goods benefit only an individual or a private corporation. When these purposes are reversed, the public suffers at the hands of private individuals and corporations.

Recent changes in intellectual property law have threatened biodiversity, traditionally understood as a common good. In 2003, the Monsanto Corporation, a U.S. based world leader in seed markets, secured a newly available European patent on a widely used variety of Indian wheat known as *Galahad 7* (Srinivas, 2003). This genetically engineered race of wheat is supposedly based on an indigenous strain known as *Nap Hal*, though multiple sources have denied that any such strain actually exists (Shiva, 2005, p. 138; Srinivas, 2003). Genetically engineered life now falls under the domain of property law. Though phylogenetically older species can "own" a member of a younger species, such as when humans own any common house pet, Monsanto decided to test the legality of owning an entire species. When the Research Foundation and Greenpeace challenged Monsanto's patent in 2004, the patent was quickly revoked (Shiva, 2005, p.149). Corporations still make every attempt to patent life (p. 149), despite that Monsanto's behavior helped cause the first Indian famine since 1942, cost Indian farmers $24 billion in new annual debt and lost resources, and

inflicted starvation upon an entire generation of Indian children while their food rotted in corporate storehouses (p. 34). This practice further resulted in the increasing prevalence of suicide and death by starvation in Indian farm communities, and directly stems from the newly established positive right of corporations to patent genetically engineered life (p. 34). Similarly, American copyright law has been reformed largely outside the congressional processes: Copyright lobbying groups have drafted everything from the laws to the committee reports, and have received nothing but a rubber stamp from the elected legislators (Merges, 2000, p. 2235). In the same manner by which corporate-reformed patent law is destroying biodiversity in India, some claim that corporate-written copyright law is destroying social marketplaces and eroding creative culture in America (Graham, 1999; Hunter, 2003; Lemley, 2003; Lessig, 2001; Lessig, 2004; Lessig, 2006; Marcum, 2001), while others argue that either no such erosion exists (Coombe & Herman, 2004; Mahoney, 2004), or that any cultural erosion has causes outside corporate interventionism (Post, 2000). These bodies of copyright and patent law, together with law governing trademarks and trade secrets, are collectively known as "Intellectual Property" (Bone, 1998, p. 243; Picker, 2003, p. 283). When intellectual property is seen as a private good rather than a public one, the markets based on those goods use human life or livelihood as the currency. All human behaviors create

markets of some kind, whether those are governed by social or physical economics. These markets, though, are not unique to humans.

Analogs to human behaviors can be seen in phylogenetically younger species. Sir David Ferrier performed brain research on frogs in Britain early last century whereby he would remove their cerebral cortex and observe the changes in their behavior (MacLean, 1990, pp. 21-22). The cerebral cortex is a brain region that plays a major role in cognition (Bharucha, 2002, p. 476), including notions of "spontaneous, directed behavior" (MacLean, 1990, p. 21). When Ferrier removed these brain regions in frogs, he noticed a marked change in their behaviors:

> Deprived of its cerebral hemispheres, the frog will maintain its normal attitude, and resist all attempts to displace its equilibrium. … If it is thrown into the water, it will swim until it reaches the side of the vessel, and then clamber up, and sit perfectly quiet. If is back be stroked gently, it will utter loud croaks. … But yet, a very remarkable difference is perceptible. The brainless frog, unless disturbed … will sit forever quiet in the same spot, and become converted into a mummy. All spontaneous action is annihilated. (D. Ferrier, as cited in MacLean, 1990, pp. 21-22).

When Ferrier's frogs were deprived of their higher cognitive abilities, they would die of starvation when "surrounded by plenty" (p. 22). This cognitive disconnect is equally observable in cognitively flawed intellectual property law: when India's cultures are encumbered with laws that do not reflect the structure of their cultures, their children similarly starve while "65 million tons [of food] are rotting in the godowns (storage containers)" (Shiva, 2005, p. 34). While depriving frogs of their cognitive abilities was of arguable ethics according to the communities with whom Ferrier was performing his research, the same manner of decontextualization is both unethical and socially destructive when applied to humanity. This sort of decontextualization is exactly what must occur, though, for intellectual property to be defined. Consequently, the bodies of law governing these forms of property should adapt to the ethics governing the markets from which those properties emerge.

Copyright, patent, and trademark law balances the rights of creators with the rights of the public, but must do so in a manner consistent with existing legislation and tradition (Nimmer, 2000; National Humanities Alliance, 1997). Fair use of copyrighted material has never been a right in itself: it is a legally defensible position based on the understanding of linguistic expression as a human right and public good. This protection of public space is a necessary precondition for the existence of democracy (Ferree, et.al. 2002, p. 289), critical

culture (Agger, 1989, p. 23), and the marketplace of ideas (O'Connor, 2005, p. 3). Through overwhelmingly oligarchic controls at the hands of corporate interests, these laws have completed the inversion of the metaphorical city wall: those boundaries that originally protected public goods from private exploitation have encroached upon the public good in favor of private interests. These actions illegitimately diminish the human freedom of expression by limiting the rights of individuals to build upon the language that creates their culture, and the culture that creates their language.

Perspectives of Linguistics

Language constructs culture, which stems from relationships in social spaces. The communications modality of digital text, then, constructs digital cultures, relationships, and spaces. The same distinctions apply to digital attention spaces as apply to analogous tangible sociolinguistic spaces: private and public goods are polarized, and fluid and fixed media frequently overlap. The mechanics of digital spaces form analogs with those of physical and sociolinguistic spaces, but these mechanics seldom fully correlate. When communities based on mutually unintelligible languages wish to interact, they form a pidgin – a simplified combination of those varieties of speech. When a child is born speaking this pidgin natively, it becomes a creole.

Formerly known as *Ebonics*, Urban Vernacular English (UVE) presents a clear illustration of a creole between English and various western African languages (Pääkkönen, 2004). Beginning its life as a pidgin language between buyers and sellers of human slaves, it served to allow communication between otherwise divergent speech communities before the American Civil War (2004). Once children were born speaking this language natively, it became known as *Plantation Creole* (2004). The UVE language still exists in many urban centers across America, and typically marks the speaker's socioeconomic background (Wolfram, 2004, p. 320).

Digital texts and societies form similar linguistic and social pidgins and creoles. Bloggers, podcasters, and videocasters form the news media of the online communications modality. Short Message Service (SMS) and Instant Messenger (IM) services provide a common vehicle for expression, and online spaces such as MySpace and Facebook work to construct the landscape of virtual sociolinguistic spaces. Beyond constructing common languages, though, these communications technologies construct social pidgins and creoles. The *semiotics* of language – the study of the forms and symbols used in linguistic expressions – is historically invested in the trade-off between speed and clarity (Aissen, 2003). Digital text is notorious for leaning towards speed in this relationship, replacing "you" with "u," and omitting punctuation when inconvenient.

The purpose of language, though, is effective communication between entities. This form of expression displays the traditional trade-off between effectiveness and brevity: when two forms of expression are equally effective at communicating a concept, the shorter form of expression is typically employed (Pinker, 2007). Those who learned and created this form of communication through observation and practice have formed the pidgin of digital language and the corresponding social space. Those who acquired this pidgin as a native form of expression create the creole of digital language. In the same manner by which UVE co-creates and is perpetuated by urban spaces in America, this linguistic modality of digital communication creates and is created by the spaces of digital text. These digital sociolinguistic spaces provide the cultural edifice necessary to allow meaningful communication to take place, which in turn allows social relationships to grow. When those outside of these spaces wish to participate in this modality of communication, must either adapt or lose the ability to interact with those surroundings. Since a speaker's participation in digital communication spaces is frequently voluntary, most individuals can largely avoid adaptations to these social and linguistic creoles. As digital communications become more prevalent in modern society, however, the construction of these social creoles becomes increasingly less voluntary.

Not all forms of digital expression share the same traits,

but all exhibit the basic properties of language. Blogging, podcasting, and videocasting typically share semiotic features with their formal counterparts of newspapers, radio programs, and television, respectively. The languages of SMS and IM services reconstruct the semiotic nature of the users' native forms of expression, in marked step with the advancement of digitally social media. In the more organized social spaces of MySpace and Facebook, the relationships between bidirectional and one-way media converge, creating digital spaces by native speakers of digital English. The linguistic landscapes of property in these digital spaces possess the same structure of possession as is present in their analogous physical spaces.

Chris Barker, a researcher in natural language semantics and associate professor of linguistics at New York University, observes that relationships between objects in language are typically represented in a partitive or possessive form of a genitive case, which can mark definition or lack thereof in such a relationship (1998, p. 679). The genitive case is a marker in language that shows ownership and membership, respectively, through possessive and partitive constructs. In English, these grammatical relationships are marked with the clitic *'s* or the preposition *of* (Shumaker, 1975), such as in "Dann's bookshelf" or "a group of students." Possessive genitive shows effective control of an object in the speaker's environment whereas partitive genitive shows membership in a whole (Barker, 1998, p.

679). Of the 162 living languages spoken in the United States of America, the three most popular languages cover 93.4% of the population: English, Spanish, and French (Gordon, 2005; U.S. Census Bureau, 2003), and each of these has distinct semantic roles for partitive and possessive forms (Barker, 1998; de Cannière, 1947; Katz 2001; Kempchinsky, 1992; Ordóñez, 1998; Shumaker, 1975). These traits of possession in language are distinguished primarily by semantic contrast, but historical linguistic research has shown a close bond between these constructions and semantic benefactive relationships, specifically that genitives likely evolved from benefactives (Lichtenberk, 2002, p. 439). Benefactive relationships semantically convey benefit of some action or receipt of some entity, such as in the phrase “this soup is for the family.” These relationships demonstrate the close tie between genitive constructions and semantic notion of benefit.

Ownership and membership are not the solely within linguistic domain of genitive constructions: some aspects of both partitivity and possession can also be expressed through the *clusivity* of the first person plural pronoun. This trait of a language describes how many forms of "we" it expresses contrastively (Bickford, 1998, p. 263). Languages with contrastive clusitivity will have two forms of "we": one inclusive, meaning "we including you," the other exclusive, meaning "we,

but not you" (p. 263). Languages without contrastive clusitivity have only one form of "we," leaving this status of the listener or reader largely ambiguous. This trait is largely absent from English, but exists in a most Algonquin, Australian Aboriginal, Polynesian, and Dravidian languages (Haas, 1969; Marck, 1996; Yalman, 1962).

In the context of this paragraph, to refer to "our relationship" would be ambiguous: the reader would lack the necessary syntactic evidence to conclude whether the pronoun refers to the relationship between him or her and the author, or the relationship between the author and something else entirely. The pronoun "our," when used to refer to a relationship already confers possession – it is in the genitive case in English. That relationship exists between the writer and reader, with both parties also belonging to the relationship in a partitive sense. Without contrastive clusitivity, it is far simpler to say "my friend Steve" rather than "the relationship between me and Steve," despite that the former introduces semantic ambiguity through a typically possessive construction. In a language with contrastive clusitivity, it is trivial to unambiguously say "our [my and her] relationship." Since brevity frequently trumps precision in the cognitive processes for linguistic expressions, this lack of clusive contrast in English pronouns creates ambiguity between possessive and social relationships. When these lines of possession are blurred, the social spaces that govern them must

account for their disambiguation.

In these social spaces, this benefactive nature of ownership and membership constructions reflects the underlying form of social relationships in conversation. When the syntactic subject of a sentence is in question, which can be the case where clusive contrast is absent, these benefit, membership, and ownership relationships lose clarity. This is specifically the case in some forms of media and digital expression in which the lines between communicator and medium are blurred. In linguistics, these formations cross the lines between syntax and semantics. Syntax is the study of the structure of language, whereas semantics is the study of its meaning. Discourse analysis, on the other hand, is the study of written or spoken conversation. This branch of linguistics sheds light on information as simultaneously an expression and a conversation (McLuhan & Lapham, 1994). Information is inert without at least three entities: a communicator, a medium, and the person with whom the information is communicated. In fluid media such as human speech, these three entities are relatively fixed. In fixed media such as print and digital text, these entities frequently overlap: the communicator becomes indistinguishable from the medium, as the medium from the communicator.

This communicator-medium is involved in the same tradeoff between expression and brevity present in spoken forms of language (Aissen, 2003, p. 435), as illuminated by semiotics:

few would choose to say “a four-legged wooden device upon which someone sits,” when the word “chair” would suffice. According to Dr. Daniel Chandler, visual semiotician and professor at Aberystwyth University, Semiotics describes the forms of these designations through the functions of signs, with applications to print and digital media in language (Chandler, 2007, p. 5). In print media and digital text, the communicator and medium can *appear* to be the same entity, though “Alfred Korzybski, the founder of the movement known as ‘general semantics,’ declared that ‘the map is not the territory’ and that ‘the word is not the thing’” (Chandler, 2007, p. 70). The relationship between the designator and the designated in language is essential to distinguish: languages and cultures create each other (Pinker, 2007, p. 260), whereas things, people, and ideas have different functions within these languages and cultures altogether (Agger, 1989, pp. 16-17). A picture of a tree is not the same thing as an actual tree, and both the picture and the life form differ substantially from the word *tree* itself.

Linguistic communication is also an anthropological universal: “All people known to anthropologists, regardless of their kind of society, have had a complex system of spoken, symbolic communication, what we call *language*” (Ember, Ember, & Peregrine, 2002, p. 218, emphasis theirs). Sociolinguistics describes how these traits emerge, and through which methods these traits construct and reflect both societies

and cultures through socialization:

> Socialization, broadly defined, is the process through which a child or other novice acquires the knowledge, orientations, and practices that enable him or her to participate effectively and appropriately in the social life of a particular community. This process--really a set of densely interrelated processes--is realized to a great extent through the use of language, the primary symbolic medium through which cultural knowledge is communicated and instantiated, negotiated, and contested, reproduced and transformed. (Garrett & Baquedano-López, 2002, p. 339)

This process – the creation of culture by language – occurs in physical spaces (Johnstone & Baumgardt, 2004, p. 115) as well as online (boyd, 2007). In the latter example, online behaviors remain roughly analog to their offline counterparts, although the second-order reflection of offline culture back into online culture has shifted cultural research methodologies (Wilson & Peterson, 2002, p. 449).

Perspectives of Economics

Intellectual property has become the major force of trade in modern global capitalism. Social forms of capital disobey many of the basic precepts of physical economics. Historically, a

society's means of production has been recognized as physical capital. These mills, printing presses, and forges are goods themselves that can be fought over, directly observed, and ethically controlled. The means of production of intellectual property, though, are human minds (Savage & Kanazawa, 2004). During modernity, enlightened societies have come to a consensus restricting the involuntary control of fellow humans, and most modern states have enacted legislation against forms of slavery. Some groups legitimately control attention without consent, if an individual has breached a social or legal contract or is not yet of age to be bound by either. These institutions, such as correctional facilities, primary schools, and militaries, are fully justified in restricting the actions and attentions of those in their jurisdiction (Rousseau, 1968/1762, pp. 57-61). Free societies, however, require a respect of the human condition that restricts any individual's right to involuntarily control another individual, unless the controlled individual has violated an established social or legal contract. Because control of attention creates control over the use of intellectual property, markets based on social capital are unable to ethically own their means of production without methods of consent and refusal.

A non-trivial part of this problem is the difficulty by which usable data on social capital is available to a researcher. Dr. Fabio Sabatini, a research fellow at the University of Sienna in Italy and prominent social capital theorist, reflects that

“despite the immense amount of research on it, its definition has remained elusive and, also due to the chronic lack of suitable data, there is neither a universal measurement method, nor a single underlying indicator commonly accepted…” (2005). Sabatini offers a model by which these data can be observed through political and civic participation in Italy. This paper forms a parallel to Sabatini’s method by adapting linguistic analysis to provide actionable data.

In absence of these data, purely economic approaches have failed to solve the problem. Instead, they exacerbate it through various forms of exploitative laissez-faire business practices (Samuelson, 2001, p. 2028) and involuntary attention control (Stayskal, 2007a). Capitalist economics, with few exceptions, involuntarily subjugates the communication rights of a society to those of enterprising individuals, whereas socialist and communist economics enforce social domination of communicative will over the individual (Stayskal, 2007a). Modern society is in a period of adaptation to social forms of capital. The previous century has seen legislation, lawsuits, and lobbying over the control of the flow of information. Each week brings news stories heralding the theft of large-scale personal information databases, the frivolous lawsuits of multinational media conglomerates, or infringements upon personal privacy meted to a population by their own government. These practices not only endanger the public spaces necessary to sustain a

democratic state, but further criminalize the behaviors fundamental to social construction (La Due Lake & Huckfeldt, 1998). These problems require a clear understanding of why information is regarded as property in order to differentiate socially constructive and destructive forms of information control.

Information, though currently regarded as property, has its roots in the relationships between those who create the information and the propertization of the information itself. This process, known as *reification*, philosophically regards relationships as observable, falsely tangible things. György Lukács, founder of a prominent school of western Marxist thought developed this concept in *History and Class Consciousness*, elaborating upon the problem of decontextualization that emerges:

> Its [reification's] basis is that a relation between people takes on the character of a thing and thus acquires a 'phantom objectivity', an autonomy that seems so strictly rational and all-embracing as to conceal every trace of its fundamental nature: the relation between people. (1971/1920, p. 83)

By this same process, government fiat gives the illusion of value to modern currencies. *Fiat* is a method of converting social capital into physical capital. Fiat currencies are, then, those

physical economic monetary units that have value decontextualized from any source of physical scarcity – their value comes from the reputation of the nation issuing that currency. This process devalues both economic capital (Feteke, 2007a) and labor (Feteke, 2007b), while intellectual property devalues human relationships through the propertization of reified information. Control is an illusion where exclusivity must be artificially created. Knowledge cannot be owned or exclusively controlled in nature: control of the purposive use of information is a positive right governed by social contract, not a human right.

Two major divisions of economic thought stem from this conception of a social contract: capitalism and socialism. The major differences between these schools of thought emerge from their respective treatments of *capital* and *means of production*. Capital refers to any economic entity that represents a usable unit of value, whereas an individual or group's *means of production* refers to their facility to use that capital toward the production of a good or service. In a *capitalist* economy, individuals and corporations may privately own a means of production and independently market the goods and services derived from that capital. These economies are based on an assumption that all market trade is simultaneously rational (Levitt & List, 2008, p. 909) and intentionally disadvantageous to one party in the transaction (Smith, 1776/2004, p. 316), and that the balance of

the market will ensure that these disadvantages benefit an enterprising private individual or group over the welfare of a society on the whole. In *Laissez-faire* capitalist systems, this trade is completely uninhibited by government intervention (p. 317), whereas in *Keynesian* capitalist economic systems, some measure of government intervention, typically in the form of economic stimulus to aid the unemployed, is necessary to preserve the economic system itself (Keynes, 1953/1964, pp. 217-218). This state interventionism is more pronounced in socialist economics.

Socialist economics and their corresponding theories in political science traditionally maintain that private ownership of any form of capital is fundamentally unethical (Marx, 1844/1964, p. 78) because all forms of capital draw value from exploitation of labor and property divisions between social classes (Marx & Engels, 1848/1964, p. 109). A socialist economy is one in which these ethical transgressions are balanced by a community that exercises some measure of control over the means of production, typically through government regulation. In a *communist* economy, all means of production are owned and managed by a central authority. Communist economies maintain that the good of an individual emerges from the good of the society, and that the purpose of a market should always be regulated to put the individual, rather than societal interest at the disadvantageous end of trade. Most of these economic systems entail political

edifice, and all incur sociological *externalities* – the unintended secondary consequences of a purposive action. Markets can be free, regulated, or posses some measure of both traits, but they are absolutely necessary within modern culture: in a society with highly specialized professions, no single individual can produce everything she or he needs in order to maintain a baseline standard of living and social production within his or her chosen profession. Markets allow producers and consumers to exchange goods, regardless of the form of scarcity upon which any market is based.

The major difference between tangible and intellectual property stems from the two forms of capital upon which these properties are based. Physical scarcity is the source of value for tangible forms of property such as guns, butter, and land. These forms of scarcity are mutually exclusive: Any individual's use of these forms of property implies that no other individual is doing the same with the same object. No two people can typically use the same gun at the same time, nor can one person eat butter someone else has already eaten. In conventional physics, no two people can stand in the same place at the same time, either: in physical property, the purposive use of a resource by one person or group inexorably restricts the same use by another person or group at the same moment in time.

Social capital is the form of scarcity that gives value to intellectual property. Though tangible property must be mutually

exclusive, intellectual property is not necessarily so. More than one person can author the same academic paper, any individual can professionally work with any number of others, and a friendship or romantic relationship with one person does not necessarily preclude similar relationships with other people, even at the same time. Monogamy provides a counterexample: in most modern societies, recognized romantic relationships are required to be mutually exclusive. This social economic exclusivity is created through political and religious regulation, however: in absence of these restrictions, many cultures eschew monogamy (Bragdon, 1996, p. 557; Marck, 1996, p. 244; Robinson, 1997, p. 303; Sahlins, 1963, p. 291; Yalman, 1962, p. 363). Since the use of social capital in one relationship does not necessarily preclude its identical use in another relationship, tangible and social forms of capital emerge into two different types of property: physical property and intellectual property.

Because of the ethical differences between exploitation of physical and social capital, these two forms of property should be addressed as distinct entities in legislation. Physical resources have no will other than that which its controllers ascribe unto them. Humanity, on the other hand, is composed of individuals with varying wills for control of their own person and influence within their society. Because of this free will, the forms of economic control of social capital must be divided between the ethical and unethical, the voluntary and involuntary. The

common understanding of human rights fails to address the involuntary exploitation of human and social resources by global corporate capitalism. The political landscape should adapt to these changes in the academic landscape of social economics, but has consistently sided with the rights of multinational corporations over those of the individuals it governs.

Perspectives of Political Science

The rights of free speech and press are respected by most enlightened and industrialized nations, including the United States. These rights recognize the emergence of communication as an *anthropological universal* – those traits which are present in all known civilizations. In America, hate speech and anti-defamation laws regulate conversation, counterbalanced by those requiring freedom of any speech that does not infringe upon natural rights. When this conversation gives rise to intellectual property, the U.S. Constitution limits congressional power to "securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries" (Art. 1, § 8). Congress has repeatedly ignored this time restriction, though, and has extended it repeatedly throughout modernity, causing intellectual property laws to become heavily biased in favor of those producing communicative acts:

> In 1970, the effective term of protection for the vast

> majority of published works was 28 years… The Copyright Act of 1976 provided for a general copyright term for both published and unpublished works of the life of the author plus fifty years. In 1998, Congress extended that term to the life of the author plus seventy years. Accordingly, even for published works, copyright owner control now commonly endures for more than a century before a work enters the public domain. As a result, it is increasingly difficult to see copyright's limited term as a tool for securing First Amendment interests. Except for works of a bygone era, much of the literature, art, film, and music that serves as the wellspring for further creative expression is subject to copyright holders' proprietary control. (Netanel, 2001, pp. 23-24)

This bias towards corporate control of conversation moves the propertization of conversation rights from its nature as a public good into the spheres of exclusive private control. This private propertization of copyright actively degrades the public good, and has been brought about in America through the actions of extensive corporate lobbying (Merges, 2000, p. 2235). This movement endangers both the media and the participant in social capital markets through the same disadvantageous trade relationships required for a Laizzes-faire market to exist. When

John Maynard Keynes observed that unemployment actively damages markets by eroding upon the basic means of production, he modeled a form of state intervention to prevent the collapse of a nation's economy when in periods of depression and recession (1964/1953). Since the predatory use of intellectual property endangers markets through these same forces, a similar method of intervention is rightly required.

Randal C. Picker, professor of commercial law and senior fellow with Argonne National Laboratory, states that the three major types of intellectual property are copyrights, patents, and trademarks (2003, p. 283), though others include trade secrets in this designation (Bone, 1998). The U.S. Copyright Office broadly defines copyright as "…a form of protection…" over "… literary, dramatic, musical, artistic, and certain other intellectual works" (2006). When an individual registers a copyright with "All Rights Reserved," he or she is actually reserving a predetermined group of rights as defined in the Copyright Act of 1976:

> (1) to reproduce the copyrighted work in copies or phonorecords;
>
> (2) to prepare derivative works based upon the copyrighted work;
>
> (3) to distribute copies or phonorecords of the

> copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending;
>
> (4) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and motion pictures and other audiovisual works, to perform the copyrighted work publicly;
>
> (5) in the case of literary, musical, dramatic, and choreographic works, pantomimes, and pictorial, graphic, or sculptural works, including the individual images of a motion picture or other audiovisual work, to display the copyrighted work publicly; and
>
> (6) in the case of sound recordings, to perform the copyrighted work publicly by means of a digital audio transmission. (17 U.S.C., § 106, *et seq.*)

These rights to reproduce, adapt, distribute, perform, display, and transmit a work (§ 106) are outlined in the Buenos Aires Convention of 1910, which was later adopted into Universal Copyright Convention and the Berne Convention (Patry, 2000, p. 386). These rights are not exclusive, though, as section 107 of U.S. Code, title 17 establishes a set of lawful third-party uses of copyrighted works that do not require the permission of the copyright holder, widely referred to as the *Fair Use Doctrine*:

> Notwithstanding the provisions of sections 106 and 106A

> ["Exclusive rights in copyrighted works" and "Rights of Certain Authors to Attribution and Integrity," respectively], the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. (Copyright Act of 1976, § 107)

Finally, the U.S. Copyright Office establishes that "ideas, procedures, methods, systems, processes, concepts, principles, discoveries, or devices, as distinguished from a description, explanation, or illustration" are "not eligible for federal copyright protection" (2006). Copyright doesn't cover ideas themselves, only expressions of ideas. The protection of methods and inventions is the jurisdiction of patent law.

Patent law is the domain of intellectual property law with jurisdiction over inventions, those this jurisdiction extends to processes, acts, and methods that are not simply abstract ideas (U.S. Patent and Trademark Office, 2005). It is possible to patent a method, typically used to protect business processes, so long as that method represents a "…new and useful process, machine, manufacture, or composition of matter, or any new and

useful improvement thereof…" (2005). This gives further clarification on the metaphor of the map versus the territory. In the same manner by which a map is not the territory it represents – no individual of rational mind would attempt to fold a mountain in half and place it in his or her briefcase, two distinct bodies of law apply to each: individuals may secure copyright on cognitive maps and patent cognitive territories. Neither copyrights nor patents may be secured for abstract ideas: copyrights secure expressions in a fixed medium, and patents govern inventions, methods, and processes.

The ethical nature of these restrictions is reflected in the manner through which an individual must be notified of them. Copyright goes into effect as soon as the expression is set in fixed form, regardless of any markings to convey that copyright to another individual (U.S. Copyright Office, 2006). Placing the copyright symbol, ©, on a work allows another individual a clear path to contact the content creator, but no markings are required in the fixed form in order to secure the protection of copyright itself (2006). Within patent law, however, markings are absolutely required. When the U.S. Government grants an inventor a patent over an article, that article "… is required to mark the articles with the word 'Patent' and the number of the patent" (U.S. Patent and Trademark Office 2005). Furthermore,

> The penalty for failure to mark is that the patentee may

> not recover damages from an infringer unless the infringer was duly notified of the infringement and continued to infringe after the notice. (2005)

This contrast in marking requirements further illustrates the fundamental differences between copyright and patent law: copyrights represent expressions, and patents represent inventions. Since conversation is a public good, copyright law automatically protects it as such without the requirement for any further purposive action on behalf of the communicator. Furthermore, since inventions are a private good, the inventor is required him or herself to protect that invention from unlawful use in order to maintain its viability under patent law.

One final striking difference between copyright and patent law is the absence of any provisions for fair use of patented materials (O'Rourke, 2000, p. 1177). Fair use of a copyrighted creative work, while never guaranteed as a right, has traditionally been a legally defensible position (Damstedt, 2003, 1179). This allows artists, writers, and media to build upon the works that predated their own, so long as the manner of employment creates neither an assumption of endorsement nor infringes upon the ability of the earlier work's creator to enjoy the reasonably profitable use of that work. In the digital world, however, the DMCA has criminalized these provisions of fair use. While making a mix tape could previously be defended under the fair

use doctrine, making a mix CD from a personal music collection is now a criminal behavior, even if that mix is made from legally purchased music (Lessig, 2001, pp. 10-11). When a car breaks, it is perfectly legal to take it apart to determine what is malfunctioning, although when any digital media system protected by DRM breaks, this same type of failure analysis is now criminal (Samuelson, 2001, p. 2028). This erodes the very development of science (p. 2028) that the framers of the U.S. Constitution were attempting to protect with patent and copyright law: "…the progress of science and useful arts..." (Art. 1, § 8). Without a provision for fair use, creativity is stagnated at the personal and market levels (Lessig, 2004), creating legal blockades to those who would otherwise enjoy non-infringing use of the works of a predecessor or colleague.

The final two major forms of intellectual property, trademarks and trade secrets, protect brands and sensitive information, respectively. For an expression to be considered for trademark or service mark protection, it must distinguish "the source of the goods of one party from those of others" or "the source of a service rather than a product" (U.S. Patent and Trademark Office, "Basic Facts about Trademarks"). In order for a trademark to be protected by the U.S. Government, it must be registered for such with the U.S. Patent and Trademark Office ("Basic Facts about Trademarks"). This marking requirement parallels that of patents, and reflects the nature of a trademark,

service mark, or any derivative branding as a private good under positive law. Similarly, according to Robert Bone, professor at the Boston University School of Law,

> Trade secret law is an anomaly in intellectual property. It focuses on relationally specific duties and imposes liability only when the means of appropriation is wrongful, where wrongfulness is mainly determined by reference to independent legal norms. (1998, p. 243)

Trade secrets must be protected first by isolation: they can only be violated if a person's means of acquisition is wrongful in any way, though these rights are more easily defended by markings (p. 243). Furthermore, trade secret law is unique in that it is protected by states in America whereas copyrights, trademarks, and patents are under federal jurisdiction (Lehman, 1995, p. 173). Copyright is, then, unique among intellectual property law in that it does not require markings in order to be enforced whereas patents, trademarks, and trade secrets require effort on behalf of the creator in order to secure protection.

Historically, Intellectual Property law has had to balance the rights of those who produce knowledge and content with the rights of those who wish to build upon it. The phrase itself, though, lacked popularity until recently:

> ["Intellectual Property"] wasn't in widespread use until

> the 1960s, when it was adopted by the World Intellectual Property Organization, a trade body that later attained exalted status as a UN agency. WIPO's case for using the term is easy to understand: people who've "had their property stolen" are a lot more sympathetic in the public imagination than "industrial entities who've had the contours of their regulatory monopolies violated," the latter being the more common way of talking about infringement until the ascendancy of "intellectual property" as a term of art. (Doctorow, 2008)

This propertization of information is a source of government and economic market infringement upon the natural right of free speech and positive right of free press, expressed most visibly through patent, trademark, and copyright law. Although Randal Picker claimed that "This type of propertization is distinctive for copyright … we should not see this for trademarks or patents" (2003, p. 284), Brian Jacobs saw this exact type of propertization on the horizon of trademark law no less than one year later (2004, p. 161). This propertization is spreading to other forms of information with similarly destructive effects. In 1998, the United States Congress passed the Digital Millennium Copyright Act (DMCA) to increase the penalties of copyright abuse online and to address the growing use of Digital Rights Management (DRM) in propertizing and protecting these forms of

information. As compared to existing copyright law, the DMCA disproportionately criminalizes a range of otherwise legal behaviors such as fair use and reverse engineering (Nimmer, 2000). In that same year, the U. S. Congress passed the Copyright Term Extension Act (CTEA), effectively freezing the progression of creative works into the public domain for twenty years. These legally mandated monopolies on human knowledge exist to shield holders of copyright from infringements correlating with the advancement of digital technologies, but do so in a manner predatory to the rights of the American public. When fair use is endangered in digital spaces through this criminalization, previously benign uses of copyrighted material such as making a mix CD or slide show, or taking something apart to see how it works, become the trappings of a digital criminal. A major part of this development stems from the use of encryption to protect intellectual property.

Randal Picker notes that encryption crosses the border into propertization of information as a full analog to tangible property (p. 283). This illuminates a shift in focus between the natures of the forms of capital. Digital Rights Management (DRM), the process of using encryption to prevent infringements upon intellectual property (Bechtold, 2004), has come into economic fashion to create an analog to physical scarcity where none previously existed. In 1997, the National Humanities Alliance advised that any modifications to copyright law in a digital

medium should mirror copyright conventions in analog forms (p. 570) such as radio, television broadcasts, and recorded media. In 1998, the U.S. Congress passed into law the Digital Millennium Copyright Act (p.1), ostensibly with provisions to preserve the landscape of fair use (Nimmer, 2000, p. 739). These provisions largely failed: "If the course apply section 1201 as written, the only users whose interests are truly safeguarded are those few who personally possess sufficient expertise to counteract whatever technological measures are placed in their path" (Nimmer, 2000, pp. 739-740). Elected officials are not writing this legislation, however. Robert P. Merges, professor of law and technology at the University of California at Berkeley, recently submitted to the *California Law Review* that:

> Copyright interest groups … draft legislation they expect Congress to pass without any changes. In the 104th Congress, they are drafting the committee reports and haggling among themselves about what needs to be in the report. In my experience, some copyright lawyers and lobbyists actually resent members of Congress and staff interfering with what they view as their legislation and their committee report. With the 104th Congress we have, I believe, reached a point where legislative history must be ignored because not even the hands of congressional staff have touched committee reports.

(Merges, 2000, p. 2235).

These practices, though economically sound by capitalist standards, are antithetical to a democratic state. These attributes of copyright propertize a commodity based on social forms of scarcity, which violates the rational assumptions of political science, but is not endemic to the landscape of copyright. These practices cross the boundaries between private and public spaces.

In 2001, Stanford Law School professor Lawrence Lessig published *Free Culture*, describing the decay of public spaces with the advent of digital cultures. Breaking rank with the objective epistemology of his discipline, he proposed reform to not only copyright law, but also social institutions. This and previous proposals brought a firestorm of criticism (Mahoney, 2004; Post 2000), but gave rise to the Creative Commons group of content licenses (Creative Commons, 2008). These licenses blur the lines of intellectual propertization by allowing authors to freely allow their creative work to be shared or built upon (2008), though their effectiveness has been limited by a lack of public understanding of the intricacies of copyright law (Bailey 2008). Through the construction of public spaces, Creative Commons licenses support both the democratic process (Feree, et.al., 2002) and a flourishing marketplace of ideas (O'Connor, 2005). Both of these are threatened with degradations in constructions of public spaces, goods, and discourse, though.

The structure of a public good fundamentally differs from that of a private one. Public goods exist for the betterment of society in the markets that would unjustly devalue the whole in favor of the value of the sum of its parts. An individual's freedom to employ public goods has historically been counterbalanced with equal freedoms of others to do the same. These balances are necessary to create social order. Historically, the human species has contextually permitted domination of fellow humans through acts of physical domination. Modern states still permit this in parent-child relationships, in that it is perfectly legal to lock a door in order to keep a child from wandering into the street. This permission does not apply for the protection of other relationships: it is seldom legal to protect a spouse, boss, employee, or colleague in such a manner. Involuntary controls on human attention are then analogous to most of the vectors of abuse observed in human relationships – attention is one of the primary sources of value in social capital. Verbal, physical, sexual, and psychological abuses are all inexorably based on the involuntary control of the physical self or social attention of another person. Within the spaces formed by these physical and social entities, intellectual property law has intervened to provide protection where such is neither necessary nor constructive.

Dan Hunter, Associate Professor of Legal Studies and Business Ethics at the University of Pennsylvania, maintains that

these constructions recognize the digital world as an "autonomous, legal place" (2003, p. 446), which should be protected from exploitation by

> … ongoing term extensions for copyright (such that few works have moved from copyright into the public domain for decades); scope extensions for patents to include business methods, life forms, and genome sequences, new intellectual property rights for hitherto unprotected collections of facts, the erosion of fair use in areas such as parodies and decompilation of computer programs; and the rise of digital rights management systems. (2003, p. 501).

These digital places have seen libertarian-style governance during their formative years (Lessig, 2006), but are finding that some regulation protects both political and economic exploitation, where the notion of "place" is constructed purely by metaphor (Lemley, 2003). These sociolinguistic spaces are derived from human conversation, for which political and economic regulation must account.

Since the source of intellectual property is the human mind, and control of one's person is recognized as a human right (U.N. Universal Declaration of Human Rights, art. 3), the ability to control one's own attention should be protected by that person's government. As John Stuart Mill observed, "to have a

right is, then, I conceive, to have something which society ought to defend me in the possession of" (2005/1861, p. 56). In America, these rights have been deteriorating through largely unregulated advertising markets (Stayskal, 2007a) and unconstitutional prior restraint in cases of intellectual property dissemination (Lemley & Volokh, 1998, p. 147). The U.S. Congress continues to pass intellectual property legislation in excess of the limitations set by the United States Constitution (Jacobs, 2004, p. 161; U.S. Constitution, art. 1 § 8; U.S. Constitution, amend. 1), reflecting underlying political and economic misunderstandings of the nature of information. Because of these misunderstandings, a holistic model is needed which accounts for the perspectives of the three most salient disciplines in a mutual, integrative context.

Research Methodology

Each single-disciplinary approach to the definition of intellectual property has fallen short of a solution that ameliorates infringements upon the human freedom of expression. Because these single-disciplinary approaches have failed, and since the topic has unnecessarily negative social effects, this question requires an interdisciplinary approach (Repko, 2008, pp. 88-90). Stephen D. Levitt, professor of Economics at the University of Chicago reflects, "Just because a

question has not been asked does not make it good. Smart people have been asking questions for quite a few centuries now, so many of the questions that *haven't* been asked are bound to yield uninteresting answers" (2005, p.79). The interdisciplinary process overcomes this pattern by asking old questions in new ways – by integrating the perspectives of disciplines that have not been able to address complex topics in mutual isolation. The strengths and weaknesses of linguistics, economics, and political science depend on each other to build a strong understanding of the rights and responsibilities inherent in the definition of intellectual property. This paper uses Dr. Allen Repko's methodology as described in his book, *Interdisciplinary Practice: A Student Guide to Research and Writing*. This process begins by identifying all disciplines that have had some relationship to the topic, and selecting a minimal subset of those that are most closely connected to the topic (p. 94), as presented in the *Introduction* of this paper.

The first segment of interdisciplinary analysis develops a command of each discipline (Repko, 2005, p. 108), providing background on the topic and a set of disciplinary baselines upon which to build. These sets of understandings reflect single-disciplinary approaches to the problem, and are presented in the *Background* section of this paper. The second segment of analysis generates insights from the single-disciplinary approaches (p. 120), and organizes them in a fashion through

which integration can take place. This is presented in the *Theories and Insights* section of this paper.

Once an effective baseline of disciplinary understandings exists, the heart of the interdisciplinary process begins: Identifying conflicting perspectives within and between the most salient disciplines (2005, p. 130), creating and building upon common grounds (p. 143), and integrating insights upon these common grounds into a more holistic perspective (p. 158). Finally, the fourth step of this methodology builds an interdisciplinary perspective upon observations developed through these insights. This perspective is presented in the *Conclusion* of this paper, and applied to the topic. Appendices are present at the end of this paper to provide greater detail on the structure of the theories this paper proposes. This research process and this paper create a gestalt: the configuration of a form greater than the sum of its parts.

Theories and Insights

Introduction of Insights

Through the study of these single-disciplinary approaches to the problems caused by disjointed intellectual property conventions, the interdisciplinary process creates a body of insights to be integrated into a new perspective (Repko, 2005, p. 124). Within the context of this paper, this integrated perspective serves to build the legislative model necessary to normalize limits on freedom of expression within the bodies of individual and societal rights and responsibilities. Linguistics is presented first, as it provides the methodology by which the analysis of contrast creates the baseline currency for social interactions. These social interactions follow the patterns of economic markets, which transition into the insights of the regulation provided through the study of political science. The necessary regulatory contours of property conventions described in this paper provide the most actionable surfaces of a gestalt, grounded in the discussion of the nature of discussion itself. The study of linguistics develops an understanding of language and how it is used, deeper insights on the relationships between language and culture, and by derivative, the truths those cultures hold to be self-evident.

Insights from Linguistics

The construction of linguistic pidgins and creoles parallel the equivalent creation of social and cultural pidgins and creoles. The creoles of Urban Vernacular English and Digital English both serve two social purposes: they mark the socioeconomic background of the speaker, and they adapt to the contours of the sociolinguistic spaces produced by each language variety. When two individuals communicate, their social spaces interact to produce a social pidgin. This process creates a new sociolinguistic space from the parent spaces, with dimensional attributes analogous to each dimension in the parent sociolinguistic spaces, but not identical to either in mutual exclusion. This is analogous to the process of socialization, through which children acquire language and culture from their parents. Once this social pidgin is taught to a child as a "native culture," it becomes a social creole. When both parents and the cultures in which those parents participate share a common language, the social creole between parents and children will not vary widely: languages do not typically adopt contrastive syntactic forms in only one evolutionary generation when isolated from contrastive social spaces. When either parent or the cultures in which those parents participate do not share a common language or social space, the pidgins they form become the social creole of the child, which frequently do vary widely in

one evolutionary generation. This effect is clearly visible in Urban Vernacular English.

Despite that 162 living languages are spoken natively in American homes, 82 percent of those households are monolingual, with English being the sole language of expression (Gordon, 2005; U.S. Census Bureau, 2003). This cultural isolation inhibits a person's ability to experience linguistic contrast, which in turn guides the conceptual spaces an individual can explore. In Urban Vernacular English, the environmental use of the word "be" is contrastive (Wolfram, 2004, p. 325). Urban Vernacular English is a modern variant of African American Vernacular English, which came into prominence during the migration of African Americans to the urban centers of the United States during the early to mid twentieth century (p. 319). This language is similar enough to most common variants of English in America that it shares the same base name, but the social spaces created and allowed by each are not always interchangeable. The word "be" is a verbal aspect marker in UVE, meaning it shows the habitual relations of time and completion between the subject and verb of a sentence (p. 326). For a speaker of that language to say "Dog, why you illin?" would roughly correspond to "Hey, man, why are you doing something you're not supposed to?," whereas "Dog, why you *be* illin?" would imply that the person is acting out of line as a substantive part of his or her essence – that they're

misbehaving because they always misbehave, not just because they did in the instant during which they were addressed. Most dialects of English lack such a simple way to express this verbal aspect across all tenses (p. 325). The differences in the social spaces constructed by these languages can have lasting negative effects, outside of the stereotyping of the speaker's background to include "urban poverty and racial disparity in school performance" (p. 320). During a scenario in which a UVE-speaking child approaches a teacher who neither speaks nor understands UVE, if the child were to say "Yo, teach, my pop be illin on me," the teacher may not know whether to call the parent, call a linguist, or to rightfully call Child Protective Services. Languages create social spaces, which in turn span conceptual subspaces – the basis of human thought. As such, if any semblance of equality is going to be reached between cultures, the highest priority of law should be to protect these spaces from economic exploitation where that protection is necessary and sufficient. Law that governs intellectual property rights, then, should examine and conform to the sociolinguistic spatial geometry of ownership and control structures within a culture's language.

The main types of the genitive case in language, possessive for ownership and partitive for membership, reflect the underlying semantic contrast of cognitive influence constructions: "linguistic possession presupposes conceptual

possession" (Teilbande, 2001, p. 335). This contrast mirrors a psychological distinction between relationships, but both relationships take the same overlying form. In many ways, an individual's influence of their relationships parallels their relationships' influence of him or herself, regardless of the form the relationship takes. A parent's relationship to his or her children, an investor's relationship to his or her wealth, and an employee's relationship to his or her company all represent the same underlying form of mutual benefit. The fact that they remain semantically distinct despite the frequency by which they occupy the same grammatical territory reflects an underlying truth: though they both refer to a type of social influence, these influences are distinct, but mutually symmetric types of relationships. To be a mutually symmetric relationship is to assert that the existence of one is simultaneously a prerequisite and derivative of the other. Though membership and ownership are closely related, likely arising from underlying notions of mutual benefit (Lichtenberk, 2002, p. 439), they build a unified dichotomy – neither can exist without the other, both build the other, and the erosion of one inevitably precedes the erosion of both, and the constituent whole. Since possession is the only type of genitive form represented in American intellectual property law, the asymmetry that arises – ownership without a corresponding expression of membership, or a right without a corresponding responsibility – ends up eroding both the concept

of ownership and the forms of benefactive relationships from which both constructions arise.

As mentioned previously, syntactic clusivity also plays a dominant role in biasing ownership and membership constructions within languages. Because of the sacrifice towards brevity in languages that do not contrast clusivity, the clarity of the relationship as a relationship is sacrificed to the ambiguous terminology of a person as property: An individual may mean "the relationship between my self and my wife," but the colloquial form of expression remains "my wife." This type of propertization occurs frequently in metaphor: "I'm the first house on the left," "two suits walked up to me at the trade show," and "three Ph.Ds wrote that article" all syntactically say something they do not semantically mean. A person is not a house, tailored garments do not walk by themselves, and abstract notions of higher education are clearly unable to hold a writing utensil. These underlying relationships are clouded, though, when in the presence of indirect forms of linguistic expressions such as metaphor or contracted expressions.

Language and cognition are the means by which individuals arrive at truth, and that truth is expressed in terms of contrasts, and context of relationships within conceptual spaces. These contrasts and comparisons parallel the lenses of identification and differentiation, respectively, as described by literary theorist Kenneth Burke (Burke 1969; Wess 1996). To the

speaker of a language, these truths are self-evident: relationships have words between observer and observed, and those words have meanings, and those meanings build truth through self-evidence. Without contrast in form and meaning, language would fail at its fundamental purpose: effective communication (D. Silva, Linguistics lecture). Without contrast in human vision, the sight of a chair sitting in front of a wall would contain no borders, shape, or form: it would simply be a chairwall, a wallchair, or most likely another word entirely. In essence, that chair would lack its essence of *chairness* – the self-evident truth that there is something in front of a wall, and that something is called a chair. Without the contrast of edges, colors, and depth, the observation would be of no purpose to the viewer, or to the societies in which the viewer participates. Because individuals can perceive contrast in both visual and cognitive domains, language is possible: the word for “chair” is not the same as the word for “wall.”

In a similar manner, the *meanings* of these words are correlated with the *perception* of these things through societal interaction. If one speaker points at the chair, saying “stul,” and the wall, saying “styenoi,” his utterances are not going to be understood by another individual pointing at the same respective objects, but saying “chair” and “wall.” The second speaker might think the first meant to say “stool,” being similar to something very similar to a chair in his or her own language, but the word

for “wall” bears no resemblance to what he or she would call the side of a room. This contrast provides the basis for identifying languages: the language of the first speaker would be called “Russian,” and the second, “English.” By looking at the similarities, though, it becomes apparent that these languages are related in some way. In fact, Russian and English are distant cousins in the same family of languages: Indo-European (Gordon, 2005).

Within speakers of the same language, this same relationship between contrast and comparison builds the truths that span the distances between minds. The only means by which an individual knows that a “chair” is a piece of furniture upon which someone sits is that someone else, or more frequently a group of people in his or her speech community, pointed at the same thing and said the same word. This happens through the process of socialization, through which a child or otherwise social novice acquires the ability to interact with a society (Garrett & Baquedano-López, 2002, p. 339). Through their social upbringing, this is presented with such frequency that the *chairness* of that distinct, environmentally contrastive object in their mind becomes wholly self-evident. To question another on the “chairness” of a thing upon which a person sits is akin to questioning the validity of that person’s perception. In absence of a contrasting language, a “chair” is always a “chair.” For an individual to suggest it be called a “silla,” a “chaise,” or a “stuhl”

would elicit a confused response from an English speaker who had no prior exposure to Spanish, French, or German, respectively. The same underlying conceptual structure exists among these languages – anyone can look at a chair and produce the word used to describe it in the tongue of their parents and native community, though the surface structures of this expression are typically unique to a language, and the conceptual structures unique to an individual: each word will have nuance and subtlety associated with its contextual use. Lakoff and Johnson reflect that conceptual structures are the basis for meaning:

> The meaning of a sentence is given in terms of a conceptual structure. … The conceptual structure is grounded in physical and cultural experience, as are the conventional metaphors. Meaning, therefore, is never disembodied or objective, and is always grounded in the acquisition and use of a conceptual system. (2003, p. 197)

The fact that ownership and membership are distinct in language reflects the underlying distinction of conceptual structure – though the ideas are mutually distinct, they are tightly related. The existence of any ownership implies the same degree of existence of the parallel membership, and the destruction of any membership implies the destruction of the parallel ownership.

When a person owns or controls anything: a relationship, an observation, an idea, a piece of land, or a teakettle, they participate in the society of that ownership. When this occurs, that society, be that an individual's "society of mind" (Minsky, 1998) or a physical group of people, participates in the ownership and the control of the individual. In a cognitive sense, the things and relationships an individual or group controls also control that individual or group.

These distinctions are reflected in information's nature as simultaneously an *expression* and a *conversation*. As Alfred Korzybski famously mused, "the map is not the territory" (as cited in Chandler, 2007, p. 70). The painter René Magritte reflected this in his work, "The treachery of images," which depicts a painting of a pipe above the phrase "*Ceci n'est pas une pipe*," meaning, in French, "This is not a pipe." The painting demonstrates this relationship between the expressive and conversant relationship of information: nobody in their right mind would pick up a picture of a pipe and try to smoke it any more than they would ask a text book what it thought about the snow storm last week. The painting is obviously not a pipe – it's a painting of a pipe. Similarly, the words on a page are not the things, people, or ideas they represent, just as the words exchanged in a conversation are created by the substance of thought, but are not the substance of thought itself.

The phrase "intellectual property" itself can be misleading

in this discussion, as Stephan Kinsella, columnist for the *Mises Economic Blog* points out, "it would be nice to take the word 'property' out, and just refer to the rights conveyed," since "… intellectual property is neither intellectual, nor property" (2008b). The phrase "intellectual property" is itself decontextualized from its underlying representations: social-spatial relationships. This construction artificially modifies the sociolinguistic space of those who necessarily discuss the topic by biasing that discussion with inaccurate terminology. This decontextualization devalues the phrase itself as a linguistic map of the underlying cognitive territory, and further devalues both notions of "intellectual" and "property" through its haphazard use in discourse. With such a flawed, but ubiquitous designation, this devaluation is both necessary and constructive: it leads theorists to examine the underlying cognitive territory and suggest new linguistic maps thereof. Kinsella himself led such a discussion, offering "pattern rights," "innovation rights," "pattern privileges," and "information privileges," (2008b), though none of the existing suggestions completely fit the contours of the underlying cognitive and social spaces.

In a culture driven by this flow of information, when the words that give substance to thought erode, their relationships with the things they signify change in ways that recreate the societies built upon the free expression of the words themselves: "Money, science, edifice, and figure … comprise a positivist

culture in which writing loses its distance from reality and thereby reproduces it" (Agger, 1989, p. 34). This reproduction between word, thought, and conceptual space recreates the societies based thereupon, shifting language along with the flow of information. When this occurs, "everything is material, everything produces, [and] everything reproduces, including textuality" (p. 58). When words lose the distance between the signifier and the signified – between the map and the territory - the gap closes quickly between the conversation and the expression thereof, and the reproduction of words is required to reproduce societies and cultures. Because of this, "… every reading is also a rewriting … readers, in any case, construct authors" (Chandler, 2007, p. 200). This cycle recreates substance from words and words from the substance of expression in the image of conversation: the context in which words are inexorably based. This is how a Chomskyist knows a Chomsky, how a Marxist knows a Marx, and how a Christian knows a Christ: "In the beginning was the Word…" (John 1:1, New American Standard Bible).

The information contained in the relationship between a thought and a word is distinct from the relationship itself, emerging from the mutually beneficial, creative, and destructive properties of control and influence. The expression of these properties, in the form of ownership and membership are both linguistic universals – that is, they exist in every known human

language (Teilbande, 2001, p. 335). Furthermore, human language itself is an anthropological universal – it exists in every known human society (Ember, et.al., 2002, p. 218). The free enjoyment of those universals within human societies should be protected as a human right (Stayskal, 2007b, p. 5), so long as a person's enjoyment of that right does not inhibit the same enjoyment by another person (Mill, 2005/1861, p. 56; Locke, 1823/1689a, p. 7; Rousseau, 1762/1968, p. 61; Wilhelm, 1999, p. 145). Those human rights can take the form of natural or positive rights, as governed by natural law or social contract theory, respectively. These necessary and sufficient enjoyments of natural rights are reflected not only in the manners by which individuals create conceptual spaces of property, but also through the physical manifestations of that creation. Ray Jackendoff, professor of linguistics at Tufts University in Massachusetts, elaborates, "Whereas the fundamental units of spatial cognition are physical objects in space, those of social cognition are persons in social interaction" (1999, p. 72).

Linguistic behaviors form these social and sociolinguistic spaces through their treatment of ownership, membership, benefit, clusivity, and social distances. These contrasts allow communicators to differentiate between relationships in conceptual space, which in turn generate linguistic maps to underlying cognitive territories. When property in sociolinguistic spaces is structured according to tangible property conventions,

those social and sociolinguistic spaces degrade through the erosion of the human condition. This erosion occurs when linguistic maps are removed from their native contexts: the communicative nature of words degrades as a direct product of that decontextualization. This decontextualization is evident even in the name of the topic discussed in this paper, which transforms the existing conversation into a search for the deeper structure of this form of property. Since relationships of property emerge from human minds as a means of production, this discussion will benefit from a clearer understanding of social and physical economics.

Insights from Economics

Modern economies are largely based on the generation and trade of intellectual property. Kevin Kelley, co-founder and former executive editor of *Wired* magazine continues, "… This super-distribution system has become the foundation of our economy and wealth. The instant reduplication of data, ideas, and media underpins all the major economic sectors in our economy, particularly those involved with exports" (2008). When left to unfettered market behaviors, this free flow of information rapidly becomes cognitively overwhelming: the social costs of this overload of information far outstrip any "benefits arising from participation" in those cultures (La Due Lake & Huckfeldt, 1998,

p. 570), forcing the consumer of information into a "… tyranny of small decisions" (Schwartz, 2005, p. 21). The effects of this information overload on members of an information society are based in the nature of information as an attention relationship between communicators. This attention gives value to a relationship, but that value is by fiat when the relationship is decontextualized from its means of production.

In a capitalist economic system, private control of a society's means of production is permitted. In a socialist system, the society owns and operates all means of physical production. According to Marx, the transition from a capitalist state to a communist system occurs through a stage of socialism (1964/1844). This transition requires the ability of a society to simultaneously be *stateless* and *classless*. For a society to be stateless – that is to exist without a government – is historically unsustainable. Furthermore, a society without class stratification is psychosocially impossible (Stayskal, 2007b, p. 5). Socialism presents a middle ground between the two constructions in which the public controls a society's means of production in cases where abuse thereof would infringe upon natural rights. Otherwise, private interests that promote regulated markets own the means of production. Because of these traits, socialist economics most closely model social spaces.

The social spaces formed by both branches of economic theory have unique perspectives on the concept of valuation. In

physical economics, the value of a currency declines through its purposive use – that is, the more money you spend, the less of it you have. In social capital theory, the currencies actually *increase* in value through purposive use (Sabatini, 2005, p. 13). Attention invested in a relationship actually makes that attention *more* valuable to the social market on the whole. The major differences between the construction of social economics and its physical analog are best illuminated by contrasts between the means of production of physical goods and social behaviors. In a sociolinguistic economy, the means of production are the people themselves who participate in the sociolinguistic space. Social currencies take many forms, dominantly through conversations, public media, and the written word. These currencies have traits of economic supply and demand by means of the human need for production and consumption of these social patterns. Reputation exists in both spheres, though is more dominant as a price determiner in social spaces than in physical analogs (Solove, 2007). Most markedly, the distinctions between public and private control of means of production are largely absent from social spaces. In social economics, means of production are always privatized, because these means are human minds themselves.

The devaluation of social currencies partially happens concurrently with the same property of physical currencies. In antiquity, a bank was required to have a monetized unit on

deposit for every corresponding monetized unit loaned out (Taeusch 1942). This one-to-one ratio prevented what was then considered the crime of *usury*, the practice of charging interest in the lending of money (Kirschenbaum, 1985). Since the early seventeenth century, however, this has been decriminalized and encouraged (George, 1957). The fractional reserve banking system is based on a one-to-many ratio between monetized instruments stored by banks and those lent to borrowers (Dewalt, 1972). This means that for any one dollar on deposit with a bank, that bank can lend out more than one dollar to other customers. The dollars lent out are based on a fraction of the dollar that bank has in reserve, and gain value through the fiat of the bank (1972). This compounds the ascent in popularity of *fiat currencies*, and devalues physical economics to only those monetary units that can be reified from their underlying representation as a form of physical scarcity (Feteke, 2007a; Feteke, 2007b). A fiat currency is that which has value not through any form of scarcity, but through government or private declaration. This illusion of value historically ends in hyperinflation, monetary devaluation, and political and economic reconstruction (Feteke, 2007a; Feteke, 2007b). This form of reification is fashionable in modern economic states, but fundamentally unsustainable. Intellectual property is based on this same type of fiat, though represented in social spaces rather than physical ones.

Interpersonal relationships robbed of context are inert, and analysis thereof inherently flawed. The decontextualizing nature of reified relationships and fiat currencies inherently destroys that which they attempt to model. Understanding knowledge as a conversation, and conversation as a relationship, it is clear that knowledge can never be property: in that state, it cannot retain its definition in absence of its context. Frequently, reification practices lead to predatory exploitation by modern corporations. In the wake of World War II, global markets have shifted from production of *things* to production of *brands* (Klein, 2002b). Brands present the reified nature of the relationship between producer and consumer in a market economy, but otherwise lack measurable value in the same manner in which social relationships lack the ability to be measured directly (Savage & Kanazawa, 2004). This fundamental shift in the nature of modern economics reflects the nature of a fiat currency and shares its eventual ends: hyperinflation and devaluation. When relationships and conversations between individuals are reified in this same manner, the outcomes are parallel: *false consciousness* and overwhelming *anomie*. False consciousness refers to the loss of economic meaning that stems from economic abstraction; anomie refers to this same loss, though in a social sense, through social abstraction.

These social and economic abstractions do not share roots in the same form of capital: anomie stems from decontextualized

and abstracted social capital whereas false consciousness emerges from abstractions of physical capital when removed from their contexts. As mentioned, social capital shares the property of a marketplace with its physical analog though conceptual evolution has developed traits that fail to translate between the models. In a conceptual evolution scenario, both forms of capital can be said to have the *earliest common ancestor* of human labor. In their current states, the traits of each form of capital can be examined in such a manner that that examination parallels words between languages. Both forms of capital are indeed capital because they denote a form of value that can be used in a market exchange. The fact that different words exist to describe the traits of these markets, such as *supply* versus *knowledge*, *money* versus *attention*, and *exchange* versus *communication*, implies that these forms of capital evolved through different means, and are likely different *things*, in a reified sense. The fact that the same words can be used between both, however, such as *paying the rent* versus *paying attention*, and *exchanging stories* versus *exchanging tires*, should then imply that both forms of capital are cousins in the same family of behavior in the same sense that English and Russian are different languages, but still closely related. These analyses lay the groundwork for what the author of this paper terms *social genetics*, or the study of inherited characteristics within human behaviors through socialization that parallels the propagation of

ideas through social spaces. If social and physical capital share the earliest common ancestor of human labor, then social and physical economic markets share the earliest common ancestor of work communities: those societies throughout history in which there was little to no division between personal and professional behaviors. Through different lenses, this shift may have come as early as specialization of labor or as recently as the onset of industrialization. What both of these lenses convey, though, is that at some level, professional lives are personal, and personal lives professional. The same socialization occurs in each setting, where supply is met with currency is exchanged through a market or attentions are exchanged through a conversation.

Ideas, words, phrases, concepts, and thoughts are never transparently adopted between people; they are only adapted through socialization as a product of intertextuality. It is frequently mentioned that no two words in any pair of languages will have identical meanings. The continuation of this is that the same holds between any two idiolects, the specific expressions of a language an individual employs. This same pattern holds in economic and social spheres, through the understanding that actions can be misinterpreted as easily as words, and that no two individuals will place the exact same value on any physical-space good or service. These differences arise from human-genetically evolved variations, and from environmental influences: though two people can have identical genes, albeit rarely – in the case of

identical twins, no two people can have identical life experiences. The application of this understanding to risk behaviors is the basic cause for stratification of cultures into social class (Stayskal, 2007b). These social classes divide when understandings of capital erode the markets upon which those societies are based.

In physical economic markets where exclusive private possession is permitted, the use of an individual's property by a third party is considered theft when that owner's consent is absent. This can be governed by social contracts, particularly in the cases of criminal forfeiture law, though the right of the possessor is typically respected over the right of the community. In social economics, all individuals naturally own and control their social capital, but control of that capital is almost exclusively through social contracts. When those social contracts are breached and that social capital is used without the consent of the possessor, an analog to theft is any form of communication that is not already governed by a voluntary social contract (Stayskal, 2007a, p. 6). By this understanding, highway billboards, telephone pole fliers, and most forms of advertising are theft of an individual's attention, if no social contract exists between the advertiser and the individual (p. 6). Some forms of advertising are governed by an existing social contract, though, such as magazine and newspaper advertisements, and television and radio commercials: in order for those services to exist, the

individual knows the advertising must be present. Billboards on highways and flyers on telephone poles, however, do not improve upon the environment in which they are present, nor is attention invested in them voluntarily: they are an externality, in the same field as crime and pollution.

In the study of intellectual property, social capital must be accounted for in order to avoid these behaviors: theft, which is illegal in physical markets, has become commonplace in social markets. In order for something to be *stolen*, however, it must be a form of property with natural boundaries. As Bessen and Meurer point out, any construction of property requires clearly, naturally exclusive borders (2008, p. 3-1). In physical property, this is clearly the case: if a book is sitting on a table, there is a clear, physical boundary between the book and the table, and indeed between the book and everything that is not that book. In intellectual property, grounded in social capital, these boundaries must be created artificially in order to extend the metaphor of *theft* to translate from physical capital into social capital and intellectual property theory.

Two traits of digital relationship economic models are absent from their physical capital analogs: cryptography and Digital Rights Management (DRM). Cryptography is the practice of intentionally obscuring digital information to artificially create exclusivity. Cryptography, like capital, is not intrinsically ethical or unethical – the question of ethics stems from the

methods of consent and refusal in its purposive use. In most modern states, the only positive protection of those natural consent rights are positive rights restricting governments from issuing a subpoena of an individual's cryptographic password. Many forms of DRM rely heavily on the practice of cryptography to enforce economic exclusivity, artificially dividing the socioeconomic spaces of market trade, and creating a form of scarcity through the same practice that creates a fiat currency. All trade in a free market physical economic system is intentionally disadvantageous because of information asymmetries between buyer and seller (Smith, 2004/1776, p. 316). Media that possesses DRM is disadvantageous to the consumer not only because of this fiat scarcity, but also because methods of consent and refusal are governed by legal contracts that don't parallel the social contracts upon which they should have been based. These forms of fiat social capital, in the same manner as exists in physical capital through fractional reserve banking, is highly vulnerable to predatory exploitation by corporate interests in absence of government oversight.

According to Adam Smith, all trade is rightfully disadvantageous (1776/2004, p. 316). When those disadvantageous relationships are applied to attention relationships, they destroy the relationships that form their own basis of value:

> In terms of social decision-making, negative emotional states are observed behaviorally as a result of both inequity and nonreciprocity, such as unfair offers in a UG [Ultimatum Game]. These emotional reactions have been proposed as a mechanism by which inequity is avoided and may have evolved precisely to foster mutual reciprocity, to make reputation important, and to encourage punishment of those seeking to take advantage of others. (Sanfey, 2007, p. 600)

These cognitive reactions to disadvantageous trade build two overarching insights. Social economic systems not only follow different rules than tangible economic systems, and any attempt at modifying the structure of social spaces to match the rules of physical spaces inherently destroys relationships. In fact, those relationships decay at a deterministic rate: any decontextualization of a relationship removes a corresponding amount of private value from that relationship.

Because of the problems inherent in applying this disadvantageous nature of market-driven trade to attention markets, economics alone is ill-equipped to address the question of Intellectual Property in absence of the perspectives of linguistics and political science. The economic practices of DRM, branding, and advertising have only served to worsen the issue, leading to a further disintegration of modern social

enjoyments of the rights and responsibilities of conversation. Not only do social forms of capital lose their value in absence of their context, any attempts to exploit that value will destroy the capital emergent from a social means of production. Because of the unethical nature of involuntary exploitation of humans, a holistic examination of intellectual property must proceed to the study of political science.

Insights from Political Science

The body of law produced through flawed economic understandings of property will itself need modifications to adapt to this form of capital. The framers of the U.S. Constitution saw constructions of property as important enough to the preservation of a free society that they guaranteed this perpetual right therein (Lessig, 2004, p. 119):

> The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized. (amend. IV, § 1)

These same individuals saw intangible property as fundamentally different than its physical analog: The rights to intangible

property are of necessity only for a “limited time”:

> The Congress shall have power to ... promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries (Art. 1, § 8)

By this distinction, no rights to intangible property are perpetual – they must, by social necessity, eventually expire into the public domain. Through the fair use failures of the Digital Millennium Copyright Act, the ever-increasing domain of copyright duration in the Copyright Terms Extension Act, and the actions of copyright lobbyists to actively propertize information, these distinctions are in danger of losing their clarity.

It is established that copyright law accorded unto digital spaces should analog the same law as applied to physical spaces (National Humanities Alliance, 1997, p. 571), though they clearly do not (Nimmer, 2000, p. 742). The provisions of the DMCA that restrict circumvention of Digital Rights Management (DRM) prohibit activities in digital spaces that are both legal and necessary in tangible spaces (Samuelson, 2001, p. 2028). Cryptography, as frequently used in DRM, has the linguistic analog of two individuals speaking in a language that is unintelligible to a surrounding group. In human language, when this happens, a pidgin is formed between the speakers of each of the two languages. Through restrictions on reverse engineering

of digital communications, the DMCA threatens a natural behavior of humanity: pidginization of varieties of speech between otherwise linguistic isolates.

Copyright holders have a constitutional right to protect their intangible property from unlawful use for a limited time, but the structure of DRM runs so counter to the communicative nature of humanity that it endangers not only progress in science (Samuelson, 2001, p. 2028), but also the continued emergence of the human behaviors of linguistic pidginization. Since human behavioral universals that can coexist in a context define human rights, and those human rights under Lockean doctrine are protected as natural rights, provisions of Digital Rights Management based on obfuscation of language through cryptography infringe on the human right of conversation. This "new orthodoxy of rights management" threatens not only the emergence of language culture, but also the body of existing property rights (Cohen, 1998, p. 462) as established by a powerful history of political philosophy.

John Locke famously stated that "life, liberty, and property" are natural rights (1823/1689b, p. 163), which establishes their nature intrinsically as a product of the human condition, and restricts governments from infringing upon that right (Marshal, 1992, p. 661). Of these natural rights, John Stuart Mill defines "liberty" as "protection against the tyranny of the political rulers" (2004/1859, p. 1). The rights expressed in the

U.S. Constitution over physical property, are ambiguous in their classification: they exist in perpetuity, and Congress is restricted from infringing upon those rights, which both imply that these rights somehow act like natural rights. In the United States Declaration of Independence, the authors chose to exclude "property" from the list of "unalienable rights," opting instead to establish these basic rights as "life, liberty, and the pursuit of happiness." Although the right to tangible property is not clearly established as a natural right, it is guaranteed under the same provisions afforded to other natural rights. Rights to intangible property, including all forms of intellectual property are not natural rights: they are positive or "legal" rights, and governed by a different body of political theory altogether (Marshal, 1992, p. 661). The clearest indication that intangible property rights are protected as "positive" rights in the constitution is their limited duration: at some point in the existence of any intangible property, the rights of the creator to his or her intangible property are removed by the U.S. Government and placed in the public domain. This behavior does not happen with natural rights: when a right exists as a function of the human condition, no government entity is ethically permitted to arbitrarily remove an individual from the enjoyment of that right.

In the context of the Copyright Term Extension Act, those properties are blurred. The active term of all American copyrights, which are a form of positive, "legal" right, have

expanded constantly since 1970 (Netanel, 2001, pp. 23-24) in step with the passing of time. Whenever copyrights are due to expire, owners of highly capitalized copyrights push the U.S. Congress to arbitrarily extend the duration of those copyrights (Merges, 2000, p. 2235). In most cases, these lobbying groups are so powerful, they take the place of the U.S. Congress altogether, writing laws and committee reports, and ultimately excluding the senators and representatives from the process that they were rightfully elected to uphold (p. 2235). These constant expansions not only violate the "limited terms" provision in article one, section eight of the constitution, they violate the very nature of intangible property and representative democracy. The method by which these expansions are put into effect reflects the unbridled power of unregulated free markets: when corporations are permitted to ignore democratic processes, internally and externally, those corporations become the state.

The cognitive disconnect between copyright lobbying and the erosion of fair use is that conversation is a public good, and elected officials are stewards of that good. Private corporations do not protect public goods; they privatize gains and socialize losses. Governments protect public goods through public means, socializing gains and privatizing losses. The public officials must remain open and accountable for democracy to function. The democratic process requires an unfettered Jeffersonian "marketplace of ideas" (O'Connor, 2005, p. 1). For these ideas to

be developed and exchanged, the social spaces that generate them cannot be impeded by predatory intellectual property legislation. For these artificial sociolinguistic barriers to be deconstructed, the stewards of the public good of conversation must be held accountable for bowing to corporations who seek to divide those spaces for private gain and social loss.

These two forms of property, physical and intellectual, are not only reflected in the U.S. Constitution, but also in contrastive bodies of political theory governing natural and positive rights. These rights are threatened when private individuals and corporations encroach upon the public domain through restrictions on social pidginization and constant extension of copyright. Intellectual property is a positive, not a natural right, and derives from conversation – a public good. These public goods should be protected, but that protection is increasingly failing to resist the predatory efforts of corporate interests to model positive rights to their intellectual property as natural rights. The borders between these categories frequently overlap, but are governed transparently by social contracts and by the naturally diminishing nature of reified relationships upon which intellectual property is based. Because failure to protect these spaces has resulted in unlawful and unrightful infringements on the human condition, and no single disciplinary approach has managed to solve the issue, this analysis must identify those aspects within and between these conflicting disciplinary

perspectives in order to determine how these conflicts can be resolved towards a more holistic solution.

Identity of Conflicts

Not all disciplinary perspectives approach knowledge and understanding with the same perspective. Of the three disciplines presented in this paper, many of these perspectives conflict in epistemology, ontology, and methodology. Epistemology, the approach to knowledge within a perspective, varies between these three disciplines. Linguistics views knowledge as predictable, measurable patterns in human language. Economics prefers to gather knowledge in the form of empirical data on human behavior within markets whereas political science approaches knowledge by studying patterns of power within human communities (Repko, 2005, pp. 57-58). These approaches can vary: the studies of behavioral and social economics break from the rationalist epistemology of physical economics in order to account for emotional human behaviors. The ontologies, the set of assumptions about the nature of knowledge, also vary between these three. Linguistic ontology is relatively objectivist and positivist – it views "truth" as simultaneously something that exists outside the mind itself, but that truth can be positively, though indirectly known (D. Silva, UTA Linguistics 2301 lecture, Fall 2004). The ontologies of economics and political

science are also dominantly objectivist, but can draw in large from the ontologies of other social sciences upon which their observations are based (Repko, 2005, p. 58). Finally, all three disciplines have different methodologies by which they produce understanding from knowledge. Linguistics produces understanding through the systematic, scientific analysis of traits and behaviors of language (D. Silva, Linguistics lecture). Economics and political science, however, produce understanding through statistical analysis of observed human behavior (Repko, 2005, pp. 57-58). These different approaches to knowledge produce different insights, though the variations in these approaches must be taken into account when looking for perspective conflicts. Some of the conflicts appear between disciplines, while others occur between perspectives within the same discipline, though all of these conflicts are useful towards integrating a common solution (Repko, 2005, p. 131).

Underlying Conflicts

In this analysis, there are six underlying conflicts in epistemology, methodology, theories, or assumptions. The epistemology of linguistics is concerned with what people say, whereas the epistemology of economics and political science is concerned what people do. Since these behaviors can diverge, this analysis will need to account for the conflicts that may

emerge. Furthermore, two conflicting epistemologies within the discipline of economics will need to be addressed: social economics differs from physical economics, in that the former views human behavior as simultaneously rational and emotional, whereas the latter views behavior as purely rational. Political science shares this rationalist epistemology with physical economics (Repko, 2005, p. 58), which will also need to be accounted for. The methodologies of all three disciplines also fail to fully align: political science studies the structure and use of power, whereas economics studies the structure and use of markets. Likewise, the linguistic methodology produces understanding through a systematic analysis of the attributes of language, typically in generative methodology, whereas economics and political science use mathematical analysis of human behavior using statistical tests for significance (Repko, 2005, pp. 57-58). The theories produced by each discipline towards the structure of property also form an underlying conflict: linguistics describes property symmetrically through possessives, partitives, benefactives, and clusives, whereas property constructs in economics and political science are asymmetrical. Property in economics only includes possessive and partitive notions of possession whereas political science only contains the possessive structure. Finally, within the discipline of political science, conflicting assumptions on the nature of information as a public good must be disambiguated in order for

this analysis to form an effective, holistic model of the behavior of property in the context of human behavior.

Surface Conflicts

These six underlying conflicts give rise to six interrelated conflicts in perspective. The rationalist and behaviorist epistemological conflict between social economics and physical economics inhibit the search for structure of markets, based on the contrast of the ethics of economic exploitation. These same conflicts within the discipline of economics have clouded the nature of property itself throughout the history of economic theory. Political science inconsistently assumes the nature of information as a public good, which leads to conflicting political theories on the nature of property itself. Between linguistics, economics, and political science, the underlying epistemological conflicts form mutually incompatible notions of the structure of human relationships. Differences in methodology between economics and political science also obscure the structure of organized groups when examining corporate behavior while the theories and assumptions between all three disciplines produce incompatible understandings of the nature of property. In order to build a more holistic model of intellectual property using the interdisciplinary process, these conflicts will need to be integrated into common grounds (Repko, 2005, p. 144).

Creation of Common Ground

This paper uses four integrative techniques to create common ground: redefinition, extension, organization, and transformation (Repko, 2005, pp.154-157). Because each discipline uses specific terminology, and that terminology can frequently refer to the same underlying concept, the technique of redefinition highlights the common meaning between two otherwise divergent terms (p. 154). In the cases where one discipline may have a term for which another lacks a corresponding term or concept, the technique of extension allows these concepts to span from one into the other, creating a common ground between the two (p. 156). The technique of organization builds upon the technique of redefinition, but proceeds to organize the concepts for contextual clarity within the disciplinary terminology domain (p. 156). Finally, the technique of transformation creates a "continuous variable" from two opposing concepts, allowing both concepts to keep their contextual meaning, but reflect the nature of each in the other (p. 156-157). These four techniques create common ground between the places in these disciplines where perspectives diverge, and allow this analysis to produce a more holistic model of the emergence of human behavior into

intellectual property law and convention. A major part of the model developed in this paper towards a solution is grounded in the theoretical spatialization of concepts within this topic, which provides a clearer framework for analysis of the problems emerging from conflicting views. Inherently complex issues benefit from this form of spatial-theoretic model, abstracted from subjective judgments of human behavior (Black, 2004; Gärdenfors, 2000).

Mathematics and logic famously make no claim at being correct – their value to theory is solely that they are internally consistent. Consequently, any ontology, epistemology, theory, method, approach, or perspective that is inexorably based in mathematical analysis or logical construction cannot make any greater claim than internal consistency. Since the epistemologies of interdisciplinarity and linguistics are grounded in logical analysis, and the epistemologies of economics and political science use mathematical analysis, the model produced through the interdisciplinary process in this paper makes no claim at being absolutely reflective of the vast array of nuances and subtleties within the bodies of human and humane behavior. No analysis grown from mathematical and logical roots can be absolutely correct. The model produced in this paper only claims to be *more* reflective of observed behavior than single-disciplinary approaches, and that this analysis and this model are internally consistent.

On Conflicts Within Disciplines

Two perspectives within economics have conflicting epistemologies. Social economics, which describes the behavior of social capital and social markets, has a behaviorist epistemology: it views human nature as simultaneously rational and emotional whereas physical economics takes a purely rationalist approach. This disconnect is first integrated through transformation whereby humanism can be seen as simply a point on the rational-emotional axis of economic decision making behaviors. This bridges the gap between two otherwise incompatible epistemologies by allowing each to view the theories and approaches of the other not as fundamentally incompatible, but as simply curves along an epistemological dimension in conceptual space. The differences between life markets and free markets that emerge from property spaces are addressed through redefinition around the human behaviors that emergence from social and physical markets and spaces.

Within the discipline of political science, some theorists choose to assume that all information is a public good, whereas others critically examine its nature. This divergence in assumptions leads to conflicting conclusions, and must be addressed before an analysis can move forward. This conflict is first addressed through redefinition of the conflicting views of information around their common roots as a relationship and

their emergence as forms of capital. The conflict is resolved through the subsequent transformation of that capital onto the property-spatial dimensions of public and private ownership, and tangible and intangible properties.

On Conflicts Between Disciplines

Noting that political science and economics share an objectivist epistemology – that is they construct what *should* happen based on what *does* happen, the concepts of life markets and free markets are extended across the disciplines of economics and political science. This concept is grounded in the behaviorist epistemology of social economics, towards which the rationalist epistemologies of physical economics and political science are adapted. When extending the concept of life markets into physical economics and political science, the epistemological curve between rational and emotional behavioral assumptions gives conflicting views on the ethical nature of capital. To socialist political and economic theorists, private ownership of capital is unethical and exploitative. According to capitalist economic and political theory, however, private ownership of property is a natural right. This conflict is resolved through redefinition of each view of capital around the concepts of property from which each emerge. These conflicts are then transformed into dimensions of property space, allowing each

perspective to see the other as curves along three dimensions: animate and inanimate means of production, tangible and intangible property, and natural and positive rights. The ethics of the existence and exploitation of capital are then understood not as unilateral absolutes, but as motion along curves in this property space.

The approaches to knowledge between all three disciplines examined in this paper conflict on both methodological and epistemological dimensions. These conflicts cloud the nature of human relationships, which form the foundation of conflicting perspectives on relationships as property. Where linguistics examines what people say, economics and political science examine what people do. As these behaviors can frequently diverge to create conflicts, they must be critically examined for common ground. Furthermore, the epistemological conflict between social economics and political science plays a role in this discussion as well: social economics uses a behaviorist epistemology, in which rational and emotional human behaviors are seen as motion along the conceptual dimension of methodology. Political science, on the other hand shares with physical economics the assumption that all behavior is purely and predictably rational. These conflicts are first resolved through redefinition of words and actions around underlying cognitive behaviors, and extension of those behaviors into the conceptual space of political science. Because the methodology

of linguistics contains no formal structure for directed corrective action – indeed, it contains no facility for gauging unjust action by any means, the data gathered in linguistics must then be extended into the domains of disciplines that can determine fairness and justice. Economics provides gauges of fairness through social capital theory whereas political science establishes justice around the control of the flow of information and relationships as power.

The methodological differences between economics and political science diverge as well, which creates conflicting perspectives on the functional nature of group behavior. Economics concerns itself with the study of market behaviors, whether those markets are grounded in social capital, physical capital, or both. Political science studies power relationships, and the purposive transfer of power between entities. This conflict is first addressed through organization of the data in those methodologies around the common market behaviors: social and physical markets for economics, and power markets within political science. Upon this organization, common ground is created through redefinition of all three of these markets around the common behaviors in each: ethical exploitation, asymmetric relationships, purposive use, and the concepts of supply, demand, and currency. This common ground of market behaviors is then extended into the discipline of political science, to form an analog between economic and political group behaviors and the

ethics thereof.

Finally, the theories and methods between all three disciplines addressed in this paper diverge in their treatment of forms of property. In linguistics, structures of property are symmetric, whereas in economics they are partially asymmetric. Political science only includes asymmetric structures of property, and mere shadows of those rights that should be used to counterbalance the recognized conventions of property. This conflict is resolved through redefinition of property as a space, as described earlier, with transformation of these social and property symmetries into dimensions within that property space.

Integration of Insights

This section presents the integrated form of the insights gained through the interdisciplinary process. The conceptual, social, and property spatial model is discussed first, as it lays the groundwork for the remainder of the analysis. The proceeding five sections build structure upon the common grounds in each of the five main issues that affect intellectual property law: the regulation of human behavior, the ethics of capital, the nature of public goods, the humanity of relationships, and the behavior of corporations. The final section builds upon these common grounds, offering a new analysis of information as property, producing a model of the behavior of intellectual property in social space to which American legislation should adapt.

On the Structure of Geometric Conceptual Spaces

This paper makes frequent reference to conceptual, sociolinguistic, and property spaces as analogs to geometric vector spaces. These models reflect the structure of cognition, sociolinguistic relationships, and of the various forms of property, respectively. Before integrating the insights of this analysis, the structure of these spaces needs to be clarified: these

are the models upon which the remaining analysis is built. Some aspects of these spaces parallel those described in Peter Gärdenfors' 2000 book, *Conceptual Spaces: The Geometry of Thought*, and the aspects of social subspaces also partially analog the social dimensions described in Donald Black's 2004 article, *The Geometry of Terrorism* and. In order to explain how terrorism happens, and how it comes to be called "terrorism" rather than guerilla warfare or lynching, Black builds upon Roberta Senechal de la Roche's research in *Collective Violence as Social Control* (1996) to construct geometric-spatial relationships from social behaviors, noting:

> Social space has various dimensions–horizontal (such as degrees of intimacy and integration); vertical (inequality); corporate (involvement in groups); cultural (such as language and religion); and normative (social control). The multidimensional location and direction of social life predicts and explains its behavior. (Black, 2004, p. 15)

The geometric spatial constructions of language indeed converge into this linguistic dimension of social behavior, but the sociolinguistic spaces these languages create posses a myriad of traits that are not salient to a pure sociological model.

In mathematics, various dimensions define geometric spaces: one dimension establishes a line, two dimensions form a

plane, and any combination of dimensions creates a “space” (Rotman, 2003, pp. 159-161). These spaces can be referred to by their dimensionality as well, each of these corresponding to one, two, or three-dimensional spaces. Greater dimensionalities can exist, though any space defined by n vectors is still typically called an n-dimensional space. Points, lines, planes, and spaces can all be *subspaces* of a parent space, so long as the dimensionality of the child space is less than that of the parent space. Vectors represent motion within one of these spaces, and the significance of those vectors corresponds with the purpose of the space. In these spaces, as in Black’s model of social space (2004, p. 15), locations within conceptual, sociolinguistic, or property spaces effectively reflect cognitive, sociolinguistic, or property behaviors, whereas motion in these spaces reflect changes in those behaviors. Finally, since humans most easily visualize no more than three dimensions, it is useful to restrict examples within these spaces to no more than three at a time, though all of these spaces by definition have as many dimensions as there are concepts that contrast within that space’s conceptual domain.

This paper describes three models of space: conceptual spaces, sociolinguistic spaces and property spaces. A summary of the dimensions of these spaces is presented in Table 1:

	Conceptual Space	**Sociolinguistic Space**	**Property Space**
Dimensions overall	Any form of contrast within an individual's cognitive domain or physical perception	Any form of contrast within an individual's language that affects that individual's culture	Any form of contrast within the theories of property
Dimensions addressed in this paper	Epistemology Ontology Methodology Theory Perspective	Possession Partitivity Benefactives Clusivity	Means of production Publicity of ownership Tangibility

Sociolinguistic spaces and property spaces are *subspaces* of conceptual spaces. All sociolinguistic and property-spatial dimensions also exist in the conceptual spaces addressed in this paper.

All types of conceptual contrast form the dimensions of conceptual spaces – since contrast is the basis of cognition and perception, all other theoretical spaces are subspaces of the theorist's conceptual space. This cognitive contrast creates binary systems such as "black and white," "male and female," "food the cat does or does not like," and "capitalism and communism," despite that any "biologically emergent trait … is inherently fluid" (Stayskal, 2007b):

> "Fluid," in this sense establishes populations between binary cases. … Binary systems are useful for understanding border cases in a model, but are deceptively over-simple when analyzing populations who dominantly gravitate towards one case or the other. … Humans are driven to taxonomically categorize complex systems in order to more easily understand them, but an understanding is myopic which doesn't account for the existence of the categories created. (2007b)

Lightness and darkness are simultaneously states and descriptions, but they share an inexorable relationship: neither can exist without the other. Without both, there would be no contrast, no perception, and no concept of either. On the other hand, every instance of one contains some measure of the other. The position of this model is that *all* binary systems share this fluidity – this is the very nature of context and intertextuality. Since cognition is emerges biologically, it serves this cognitive model to describe any possible cognitive or perceptual contrast as a basic dimension of the geometric conceptual space.

The contrast of contrast is comparison. Whereas contrast tells what something is not, comparison tells what something is. In Pirahã, a language isolate of Brazil, there are no words for colors: only comparisons between colors of different objects (Colapinto, 2007). Stephen Everett, an American linguist who

studied that language extensively, observed “Pirahã have no fixed words for colors, and instead use descriptive phrases that change from one moment to the next. ‘So if you show them a red cup, they’re likely to say, ‘This looks like blood,’’” (as cited in Colapinto, 2007, p. 7). Conceptual contrast establishes that the cup and blood are different objects, though comparison establishes that both are in the group of things that are red. Contrast establishes possession and ownership, whereas comparison shows partitivity and membership. The cup *has* redness in the same sense that a person has a book or a spouse, but symmetries exist in all three of these cases: the cup is a member of red things, the person is a member of book owners, and the married person is a member of the marriage itself. Comparisons between contrastive cognitive and perceptual entities then groups things with similar things, forming regions in conceptual spaces. A person knows an oak is a tree because it looks like other trees, though a person knows an oak is an oak because it is not a willow, a spruce, a car, or a fish.

When measuring these distances in conceptual spaces, two issues immediately emerge: uncertainty and complexity. Since conceptual spaces are themselves reified models of natural relationship behavior, they cannot be directly observed. This is necessarily affected by a theory from quantum mechanics, the *Heisenberg Uncertainty Principle*. This principle claims that an individual cannot measure both the position and momentum of a

particle simultaneously with absolute accuracy (Strange, 1998, p. 556) – in short, an individual cannot observe something without affecting it through the very essence of that observation. This property of physics equally applies to conceptual spaces: in order to know an individual's thoughts or perceptions, an observer must interact with that person. Since communication alters the conceptual spaces of those involved, contextual bias is unavoidable. Determining patterns in these spaces *depends* on this form of contextual bias: by moving thoughts or perception through a conceptual space, the positions of those thoughts map to a curve. In particle physics, this same property applies to electrons: since electrons move at the speed of light, and the location of those electrons cannot be measured without affecting those locations through that observation, electrons can only be described as "…a point particle existing within a sphere," a shell level through which only a region can be identified, and never a precise location (Strange, 1998, p. 213).

Since motion along such a curve "predicts and explains" behavior (Black, 2004, p. 15), and these behaviors can correspond to thoughts, words, actions, perceptions, or any other change in cognitive state, the precise cognitive position of any thought is irrelevant: in the same manner by which electrons have regions rather than positions, the only way to speak of thoughts are in topological regions of conceptual space, constructed through externally observable surface behaviors.

Since electrons move at the speed of light, cognition moves at the speed of thought, and neither is directly observable, the same pattern of mathematic description applies to both: neither can be deterministically treated as a point, but either can be adequately described as a region. These regions in conceptual spaces are bounded by contrast, but filled by comparison.

To model distance in a conceptual space, the equation must account for multidimensionality. Because of this, the Pythagorean theorem, $a^2=b^2+c^2$, will need to be adapted. To do this, first take the square root of each side of the equation:

$$a = \sqrt{b^2 + c^2}$$

This presents distance *a* cleanly in terms of component distance along two component vectors, *b* and *c*. In order to adapt this to multidimensional spaces, these two component vectors will first need to be expressed as a single summation:

$$a = \sqrt{\sum_{i=1}^{2} x_i^2}$$

Noting that the only remaining references to two-dimensional behaviors are the square root, the upper bound of the summation, and the exponent of the base vector index, this equation can be adapted to multidimensional behavior by altering these

references into a continuous variable, *n*, while updating the distance variable name to reflect its derived nature as a conceptual distance:

$$D_c = \sqrt[n]{\sum_{i=1}^{n} x_i^n}$$

In this derived equation, Traversal (T) corresponds to the traversal between two points in any number of dimensions, *n* corresponds to the number of dimensions being measured, and x_i corresponds to the value of any single component vector, or the value of any single dimension. Since emotional mechanisms can alter traversals in conceptual spaces as much as cognitive distances can, the former must be normalized before the latter can be useful. Since conceptual space has no natural origin, it is useful to calculate conceptual traversals between various amounts of contrast in any trait of an observation. Conceptual vectors, then, correspond to the pairing of a conceptual point with a distance corresponding to its motion toward another point.

Similar to the methods by which John B. Calhoun measured the “social velocity” of rats as analogs of their physical manifestations in behavior patterns (1962; 1977), distances in conceptual spaces can be measured through language. In practice, this procedure could be done with most types of

conversation. The concepts correspond to nouns, or anything that acts like a noun such as a gerund or infinitive verb. The space between concepts is established by the duration between expressions: non-linguistic pauses. In order to measure conceptual traversal, keeping in mind that every individual will have their own unique conceptual space, a useful tool will be to linguistically or visually present a test subject with a concept, and direct them to a conceptual motion. These concepts can be expressed through most nouns or pictures, and conceptual-linguistic motion can be expressed through most verbs. Once the presentation is made, take a measurement of the time it takes that individual to begin speaking an answer. This delay should correspond to the distance between the presented concept and the spoken concept. It may help to record the interaction in order to take these measurements later.

In practice, this procedure could be done with most types of conversation. The concepts correspond to nouns, or anything that acts like a noun such as a gerund or infinitive verb. The space between concepts is established by the duration between expressions. During any such test, questions should be focused as to not require subjects to think-move *through* another concept. Because of this, it will be important to select a sequence of images or words that have traits in common: though Pythagorean distance corresponds to motion in conceptual space, single-axis perturbations establish the gradients of his or her base vectors.

Another aspect of physical spaces that hold true in conceptual spaces is gravity. Physical mass creates physical gravity in physical spaces (Schutz, 2004, p. 240), whereas conceptual mass creates conceptual gravity in conceptual spaces. After measuring conceptual spaces linguistically, attention can be measured by observing this force of gravity: this establishes a metric for social capital. As Albert Einstein observed in his groundbreaking paper on Special Relativity, mass and energy are mutually derivable: $E=mc^2$ – that is, energy equals mass multiplied by the speed of light, squared (1905). In conceptual spaces, the same relationship holds: Energy, as exhibited through emotional valence structures, equals conceptual mass multiplied by the speed of thought, squared. Defining motion of thoughts through conceptual spaces requires a functional understanding of the particle physics analogs of energy, mass, motion, and distance: in conceptual spaces, these correspond to emotional charge, conceptual mass, cognitive process, and conceptual separation. Emotion can be converted into conceptual mass, which English speakers would metaphorically refer to as *the gravity of a situation*, whereas conceptual mass can be equally converted into emotional energy: the classical conditioning process through which affection becomes love, fear becomes terror, and interest becomes infatuation.

This process is modeled by Richard S. Sutton and Andrew G. Barto in their 1981 paper, *Toward a Modern Theory of*

Adaptive Networks: Expectation and Prediction. The context of the Sutton-Barto model is the measure of rates blocking in classical conditioning given contrastive conditioned stimuli. Before a discussion of this sort of conditioning can occur, a review of classical conditioning is in order. Ivan Pavlov performed psychological tests in the 1920s on dogs in which he trained a dog to salivate to a tone (Eckart, 2007). Pavlov did this by consistently presenting food to the dog along with the sound of the tone, and measuring the amount of saliva that dog produced for each pairing (2007). Once that baseline was established, he presented only the tone, and found that the dog still produced saliva (2007). In this example, the food corresponds to the Unconditioned Stimulus (US), salivation corresponds to the Unconditioned Reaction, and the tone corresponds to the Conditioned Stimulus (CS) (2007). Through the process of classical conditioning, the association between the Conditioned Stimulus and the Unconditioned Response is "established and memorized" – that is the dog eventually presents salivation when provided with the tone, rather than the food (2007).

Emotions can take a wide array of forms, though each of these has corresponding forms in a blocking model. Emotions are notoriously difficult to categorize, though one influential system includes including interest, joy, surprise, distress, anger, disgust, contempt, fear, shame, and guilt (Izard, 1977, pp. 85-92).

The conversion between conceptual mass and emotional charge happens through classical conditioning. Sutton and Barto's 1981 model describes such a process accurately due to its treatment of synaptic blocking behavior between contrastive conditioned stimuli (1981). *Blocking*, in this sense, refers to a pre-existing stimulus stopping a new stimulus from triggering anything until the new stimulus begins temporally to precede the old one. When two individuals interact, and that interaction causes some form of emotional valence, those individuals associate that interaction (CS_1) with the emotion (US) to trigger memory (UR). This is, in part, why memory is so acute in the presence of high emotions, and how relationships between people are cognitively formed. The emotions from that interaction trigger the perception of that person to be associated *mnemotechnically*, that is, through a construction of memory, with that emotion – or, more frequently, an entire matrix of emotional charge vectors.

Depending on the emotions being shared, the point at which emotional charges develop into conceptual mass comes from the removal of the blocking behavior. This is when the *thought* (CS2) of a person precedes any actual *interaction* (CS1) with that person as triggering the emotional stimulus (US) to generate this memory (UR). This is the foundation upon which both love and religion are based: thoughts, rather than actual interactions, becoming emotions. In the case of love, a relationship between two people may be called affectionate if

one, the other, or more frequently both gather a positive emotional reaction from interaction. The point at which that relationship is called love is when the thought of that person triggers motion within a conceptual space towards the position in which it would be through the analogous manner of person-to-person interaction. In short, love is when a person experiences positive emotions towards another as a result of the thought of that person, rather than any actual interaction. At this point, other emotions behave similarly: interest becomes infatuation, and fear becomes hatred. Through repetitive interaction, these emotional-conceptual relationships are reinforced through this type of classical conditioning, which is why ritual is important to religion: a behavior must repetitively be paired with an emotion in order for these conversions to take place. A third phase of this development can come through back-propagation, a cognitive analog to a feedback loop in physical space.

When a thought can trigger an emotion, concepts can “orbit” each other through constructions of emotional charge. These orbits can parallel the ellipsoid nature of masses in physical space, or in a more complex environment can take the form of a Lorenz or Lyapunov function. When this occurs, and those orbits are not stable, sustainable patterns of attention investment, conceptual masses collide. This is the point at which love becomes addiction, hate becomes violence, and emotions frequently become actions for good or ill.

Conversion between emotional energy and conceptual mass is not linear: it is affected directly by the speed at which a thought can move through conceptual space. Since conceptual mass creates other conceptual mass through cognitive contrast, and those masses directly create conceptual gravity, the relationship between emotional energy and conceptual mass must be exponential, and that exponent must be two: the minimal cardinality of a contrastive cognitive set. Consequently, whereas $E=mc^2$ holds in physical spacetime, $E_e=m_c v_t^2$ holds in conceptual spacetime. Similarly, in the same manner by which motion along the temporal dimension is bounded biconically by the speed of light, though not defined or restricted by such in the mathematics of Einstein's theory of Special Relativity, Minkowski spacetime (Naber, 1992, p. 11), motion along the temporal dimension in conceptual spaces is bounded, though also not defined or restricted, by a biconic geometric form corresponding to the speed of thought. Consequently, by measuring the pauses in an emotional conversation, these charges can be measured in conceptual space. By normalizing these thought-vectors with other individuals of the subject's same language and culture, the means and standard deviations within concept spaces for a language-culture can be determined. Comparing these data between individuals will likewise reflect which cultures with which that individual identifies. Contrasting these data between cultures, however, will allow each to mathematically "see" how

the other “sees things.”

Because of these properties, every linguistic utterance will have some conceptual interpretation. Even such utterances have cognitive interpretations that are famously celebrated as syntactically valid, though not semantically so. Wittgenstein famously illustrated such a cognitive process through his example around the nonsensical word *tove:* “Knowing that what I am now seeing is called ‘tove’ does not by itself enable me to answer the question 'And what else am I to call ‘‘tove’’?” (Stern, 1995, p. 125). Despite that the word *tove* is undefined for the majority of English speakers, the utterance of that word elicits some cognitive response. The listener may connect it with the words *cove* or *tone*, but the end-interpretation will be an adaptation of the closest point to that utterance around which a thought can orbit in phonological space, unless of course that listener has previous exposure to this Wittgenstein example. In this sense, every writer is a cartographer (Turchi, 2004). Any text is nothing more than a map of conceptual space, though what the writer intended to convey may or may not bear resemblance to what any given reader interprets. Any text or utterance that is unintelligible is a word painting.

The second issue with geometric conceptual spaces is that they are inordinately complex: when everything an individual could perceive or think about comes from contrast, and every form of contrast is modeled as a base vector in this space, the

dimensionality of that space gets out of hand very quickly. To counterbalance this effect, it is useful to use sub-spatial models: those spaces that only use a subset of the dimensions of the parent space. By this understanding, the subspaces useful toward the purpose of this paper are sociolinguistic and property spaces. The dimensions of epistemologies, ontologies, methodologies, theories, perspectives, and all dimensions present in sociolinguistic and property spaces are the salient subsets of conceptual space. Furthermore this paper's discussion of contextuality in sociolinguistic space roughly corresponds with Black's dimension of "social distance" (2004, p. 15) between the cultures of the speaker or writer and listener or reader – whether or not a speaker's utterance corresponds to a cognitive context with which the listener is familiar. The bases of sociolinguistic spaces are traits of any given language and culture, while the quality of these traits can be treated as points on these sociolinguistic dimensions. Within the context of this paper, the salient dimensions of sociolinguistic space are the respective contrasts of genitive possession, partitivity, benefactives, and pronominal clusives. In a broader understanding of sociolinguistic spaces, any contrasting trait observed in Language that has an effect on culture can serve as a sociolinguistic spatial dimension for analysis.

Within property spaces, three dimensions are necessary: animate and inanimate means of production, public and private

ownership, and tangible and intangible property. Despite that data on these spaces is notoriously difficult to quantify (Sabatini, 2005, p. 11), useful patterns are still visible: If it is known that one person always has twice as many oranges as a second person, and that both always posses positive, nonzero amounts of oranges, the exact count of oranges in the possession of each is inconsequential to the emergent pattern. A visit to a local fruit market will quickly and expensively reveal which of the two people insists on always having twice as many oranges as the other. Though quantifiable sociolinguistic data are difficult to acquire, their emergent relationships are readily visible through critical analysis. These spaces do not restrict the conceptual spaces an individual can explore; they only bias movement within those spaces. The Sapir-Whorf hypothesis posited that language determines cognition (Chandler, 2007, p. 63), which is controversial because it is dangerously close to accurate: language does not *determine* cognition in this model. Language merely biases conceptual space, guiding a person's cognitive movement within those spaces through the construct of conceptual gravity: "different languages impose different systems of spatial and temporal relations on experience through their figures of speech" (p. 129).

On the Regulation of Human Behavior

The epistemological disconnect between humanism and rationalism gives rise to diverging perspectives in capitalist and socialist economic theory based on difference in means of production. In social economics, human minds are the means of production whereas in physical economics, these means are physical objects. Physical economics and political science take rationalist approaches to their observations (Repko, 2005, pp. 57-58). Social economics, draws a behaviorist approach from cognitive psychology – human behavior is seldom entirely rational or entirely emotional. Since the emotional aspect of human behavior drives the ethical effect of property conventions on humanity, the behaviorist approach must be accounted for in a model of effective property convention. Movement between rational and emotional behaviors must be modeled as an epistemological dimension within a conceptual space, rather than absolutes that always exist in mutual disharmony. Through this adaptation, the data from each discipline can be seen as movement along an epistemological curve in the applicable social space, and integrated into a more holistic perspective.

This appearance of conflict is based in the markets between the forms of capital produced by those means. When analyzing any aspect of human behavior, it becomes necessary to distinguish the supply, demand, and price of those behaviors in

their physical and social spaces and contexts. Some behavior markets that are socialized in the United States include health care for the poor and elderly, police and fire protection, and national defense. In the case of health care, the supply is the ability to render treatment for medical conditions, the demand is an individual's need for such treatment, and the currencies include both money and human life. With police and fire protection, the supply is a police or fire department's ability and willingness to fight crime or fire, respectively; the demand is a social need for this protection, whereas the currency is, again, both money and human life. In the case of national defense, the supplies, demands, and currencies are analogous to those of police and fire protection, though: the supply is protection, the demand is the need for security, and the price is human life. Because of these two different currencies, money and natural rights, the two forms of capital that govern them, physical and social, respectively, two structures of markets are proposed herein: free markets, and life markets.

For most life markets in America, money is exchanged involuntarily through taxes and federal, state, and local expenditures. This involuntary exchange is absolutely necessary in this context of these markets, meaning any exchange in human behavior that uses a natural right as a currency. These markets typically emerge from economic systems based on social, rather than tangible economics. In each of these life markets, some

form of physical protection of an individual's life or livelihood is in demand, and the corresponding behavioral economic price is human life. These forms of protection traditionally form the base of Maslow's hierarchy of needs, though recent analysis has shown a more visceral interplay between these needs, and those needs upon which the hierarchical representation lends them to be interpreted (Levine, 2007, p. 4). Through any interpretation of Maslow's theory, erosion of the physical and safety needs necessarily inhibits the fulfillment of love and acceptance, and of self-actualization needs (p. 4). In order for an individual to productively operate within a society, that individual must him or herself be intellectually fit to form the necessary social and sociolinguistic spaces. Because of this, human welfare emerges as a common, public good: the clearest measure of a society is its treatment of the poor, the widows, and the strangers in its land. Without the government regulation necessary to provide this structure, men "…are in that condition which is called war; and such a war as is of every man against every man." (Hobbes, n.d./1651, p. 77). There are no free markets for police and fire protection, or for national defense: if an individual is displeased with the performance of their police department, local fire brigade, or national military force, they cannot legally "vote with their dollar" for a new one. This trait is indigenous to life markets: most exchanges in human behaviors do not use human life as a currency.

Most economic markets use traditionally monetized units as currency. This is the purpose of a federally regulated money supply: a consumer needs to know that a dollar in one store is worth the same as that dollar is worth in a store across the street. Buying a hamburger for lunch or trading a company's stock on an open market do not use life as a currency: they are monetary markets. The consumption of that hamburger may have lasting effects on a person's health, and the trade of that company's stock may encourage predatory behaviors, but the acts themselves do not use human life as a currency in any more than a marginal sense. Since free trade is currently the best-known manner by which to match buyers and sellers through a common price, those aspects of markets that use monetized forms of currency should remain absolutely free of government intervention. To balance this, any human exchange that even marginally creates a life market should be socialized and regulated by the federal government to the entire and exclusive extent in which that life currency acts. The production and trade of intellectual property is exactly such a life market: as demonstrated in the case of Monsanto Corporation's patents on wheat seeds, exploitation of intellectual property for private gain has cost cultures the lives of their farmers and children (Shiva, 2005, pp.34-35). When boundaries are artificially created between social spaces solely for the exploitation by private industry, the very progress of science is endangered (Samuelson,

2001, p. 2028). Since attention and relationships are the means of production in social economic systems, all market behaviors based on these means are life markets, and political convention differentiate the two.

Linguistics, economics, and political science also overwhelmingly share an objectivist epistemology: their mutual concern is to derive models to predict what *should* happen from observations on what *does* happen in human behaviors. The reverse form of this, regulating what does happen from the theory of what should, is a relativist epistemology. This approach to understanding is the mutual concern of philosophy and religion. The theoretical model produced in this paper is a form of philosophy, however: by ensuring that the three core disciplines of this issue share an objectivist epistemology, the philosophical structure of what *should* happen is firmly grounded in observations of human behavior. This foundation provides a framework upon which to build a philosophical argument towards harmonizing the purposive social actions towards ameliorations of infringements of natural rights within the two disciplines that permit it, economics and political science.

A life market is any form of human social behavior that involuntarily uses a natural right as a currency, rights such as life, liberty, or self-defense. Health care, national defense, and police and fire protection should be, and frequently are treated as life markets, though each also involves the exchange of

traditional monetized currencies. A free market is any human social behavior that does not involuntarily use natural rights as a currency. Buying fruit at a store, purchasing a car, or buying stock in a company should be, and again frequently are regarded as free markets. The corresponding political-economic theories embodied here then clearly emerge: life markets follow the patterns of socialism, whereas free markets follow the patterns of capitalism. In America, these theories already hold true: health care, national defense, and police and fire protection are already socialized, for the most part. Buying fruit, purchasing a car, or buying stock in a company are capitalized. State regulation does exist in free markets where private behavior emerges as a life market. Buying stock in a corporation – an otherwise free market – is subject to insider trading laws, antitrust legislation, and securities and exchange legislation. State regulation is a trait of life markets that can show up in free markets: all three of these bodies of regulation exist to prohibit unlawful exploitation of human life or liberty in what otherwise is considered a free enterprise.

Even within traditional life markets, some free enterprise also exists. Though both police protection and national defense use human life as a currency, the purchase of that protection on an otherwise highly regulated market is both legal and increasingly common. A baseline level of police and military protection is established and regulated by national, state, and

local governments. If an individual or group thereof wants more protection, they can purchase it on an open market in the form of private security guard services or private military services such as are available through the Blackwater Corporation. This market behavior builds on top of a rightfully socialized industry: if the federal government did not provide for national defense, and federal, state, and local governments did not provide for police protection, not only could a lasting union on the scale of the United States exist (Madison, 1788), all protection services would be left to free markets: this would be a nation of Blackwaters, and no Marine Corps. With the current oligarchic structure of corporations, the absence of a baseline of defense would destroy any semblance of the democratic process (Madison, 1787). Life and self-defense are both natural rights that would be involuntarily used as social and economic market currencies in absence of socialized police or military forces. Because of this, these are very rightfully socialized in America.

Since these two constructions of markets appear to conflict on the surface, it is useful to model them as points along a fluid dimension. The vast majority of market behaviors will have some traits of free markets, and some traits of life markets. Because of this, those aspects of any human behavior that manifest the forms of a life market should be highly regulated. All other traits of human behavior, those that take the traits of free markets, should remain completely unfettered by state regulation. In the context

of a property space, then, life markets and free markets are not distinct entities: they are the endpoints on topographical slopes between various alternatives of purposive human action. This cohesion within the structure of natural rights and human behavior builds a common understanding on the treatment of the various forms of capital, and the ethics of the exploitation thereof. With this structure, socialist and capitalist theory can begin to sit at the same table, look at the same map, and see the same territory.

On the Ethics of Capital

When this concept of life markets speaks to the political structures necessary to protect natural rights, the question of the ethics of capital emerges. Socialist economic and political theory claims that all profit is exploitative, viewing capital as "a certain quantity of *labor stocked* up and stored up to be employed," although "the *profit or gain of capital* is altogether different from the *wages of labor*" (Marx, 1844/1964, pp. 78-79, emphasis his), which is echoed by John Locke (2008). According to prevalent capitalist economic and political theory, all forms of tangible property are a natural right (Locke, 1823/1689b, p. 161), regarding capital itself as neither ethical nor unethical – only the purposive use thereof (Locke, 1823/1689a, p. 7). From the socialist perspective, the construction of capital is unethical

whereas from the capitalist perspective, only the purposive use of capital can answer to any question of ethics: "…if you take away all freedom of the will, you strip a man's actions of all moral significance" (Rousseau, 1968/1762, p. 55). The conflict in these perspectives comes from two conflicting views on the valuation of capital.

In socialist economic and political theory, capital is socially destructive not because of the nature of capital itself, but because of the differences between what the production costs of that capital and the profits taken on the purposive use of the capital. Since production costs stem from human labor, and the sale costs are largely independent of that labor, any profit taken on the use of the capital is viewed as unethical and destructively exploitative, if that profit is not then redistributed back to those who labored to create the capital. Consequently, this is a question of distribution of profits – a derivative, purposive use. This is not a question of the ethical nature of the capital itself. Capital is nothing more than the pairing of some form of property with the potential for its purposive use. Through this pairing, two topics on the ethics of capital emerge: the traits and uses the property aspects of capital, and the ethics of the purposive use of that capital.

To understand the nature of capital, an analysis must consider both of its dominant forms, physical capital and social capital, because of the ethical differences in the purposive uses

of each. As mentioned previously, physical capital is inanimate: it has no will over control of itself, and the only purposive use of this form of capital come from the will of the individual or group thereof that exercise effective control over it. Social capital, however, is animate – it is derived directly from humanity. It has a will for self-determination, and the ethics of its purposive use rely on one condition: whether the purposive use is voluntary, whether the person generating the capital can consent to that generation or refuse it. In the question of intellectual property, methods of consent and refusal are central to the question of that form of capital's purposive use (Picker, 2003, p. 282). This reflects intellectual property's gestalt as a configuration of social, not physical capital. In cases where social capital constructs physical capital, such as where a group of individuals build a computer, car, or factory, the exploitation of that capital is completely ethical so long as the participation of those individuals in the endeavor is completely voluntary. An axiomatic nature of this voluntary nature is the right to object – to refuse to allow one's attention to construct a form of capital of which the individual disapproves. Since Intellectual property stems from social capital, any infringement upon the ethical use of that property endangers the very capital that gives it value: "to violate the act that has given it [an act of association] existence would be to annihilate itself; and what is nothing can produce nothing" (Rousseau, 1968/1762, p. 63). In order for this objection

to be effective, the structure of any group must follow some pattern of democracy. The exploitative nature of the purposive use of capital does not come from the fact that it can be sold for more than it costs – the social destruction comes from the laborer's control over that sale, whether he or she can refuse to allow it without further recompense. Coombe and Herman further claim, "partial also are fictions of markets populated only by corporate authors and consumer citizens, or creative commons populated only by corporate censors and individual creators" (2004, p. 572). Neither corporations nor individuals are the sole cause of these forms of exploitation in digital media and markets: the exploitation comes from a lack of consent. In an oligarchic corporation, this consent is seldom fully explored: the destructively exploitative nature of capital-driven enterprises comes from the lack of a democratic process toward the natural rights of consent and refusal. With the rise of corporate mass media, this consent is artificially manufactured altogether (Herman & Chomsky, 2002, p. 297).

To address the lack of these voluntary methods, it is useful to model capital as an emergence from property space in three dimensions: animate and inanimate means of production, tangible and intangible property, and natural and positive rights. The ethics of capital do not come from theoretical absolutes; they correspond to points within regions of this property space. Any activity that involves an animate means of production must

ethically consider whether that purposive use could harm the natural rights of another human. If the possibility for such harm exists, regulated methods of consent and refusal must govern whether that activity takes place. Furthermore, if the object of the activity is intangible property, the decay of that property through decontextualization must also be accounted for. These methods of consent and refusal absolutely require an unfettered means of communication – a marketplace of ideas.

On the Nature of Public Goods

Some political theorists assume that information is a public good, whereas others critically examine that assumption. This assumption, if taken, produces conflicting landscapes within the space of property. Raymond Shih Ray Ku argues "against copyright protection for digital works because the economics of digital technology undercuts prior assumptions about the efficacy of a private property regime for information, a public good." (2002, p. 263). Larry Lessig, disagrees, claiming that free culture emerged because "law respected important limits on the scope of the interests protected by "property." (2004, p. 172). Property rights with time-limited scope cannot represent an inherently public good – they represent the transition of intangible property from private ownership into the public domain. This conflict comes from a flawed assumption –

not all information is “public good.” An individual’s social security number, credit card number, encryption codes, and network passwords are all forms of information that constitute private intellectual property, but only retain the utility of their purposive uses when protected from public access. Information comes from communication, though information is not the public good: communication is.

As stated previously, communication relationships are the means by which individuals construct their cognitive domains, and further are the means by which those cognitive domains construct both language and culture. Since attention is the currency of social economics, and exploitation of that currency infringes on the natural rights of self-determination, self-control, and self-defense, involuntary control of that attention in destructive and unethical in absence of a social contract allowing otherwise. Since communication requires attention in order to function, and communication is the means by which individuals exercise many of their natural rights through the emergent human right thereof, communication is a public good. Communication “belongs” to the groups of individuals that create their culture through it – it does not belong individually to the speaker, listener, or medium. Since communication emerges from a relationship, and relationships are social property and not the sole jurisdiction of an individual, the fundamental nature of communication is a social one. Since the cognitive domains

constructed by this language and culture in each participating individual are self-determined natural rights, the information produced by those individuals, as a product of those relationships is private property, though intangible. Intangible properties decay, though, when removed from their context. This is contrast of temporal protection terms set by the U.S. Constitution, and further contrasts with the nature of reified property when decontextualized. When the product of a relationship is removed from its context, it is removed from an inexorable part of its capital value. These relationships correspond to property-spatial dimensions of public and private ownership, and tangible and intangible properties.

In order for the democratic process to function, unfettered communication is an absolute necessity: the human behavior of language and culture creates a life market, and government regulation must protect that market from involuntary exploitation by any private interest: individual or corporate. Because of this need, control of communications media absolutely must be decentralized, and advertising should be highly regulated. When an individual or corporation controls a means of communication, they have the power to censor and adapt the messages communicated over that medium to their personal interest. Herman and Chomsky continue,

> The mass media serve as a system for communicating

> messages and symbols to the general populace. It is their function to amuse, entertain, and inform, and to inculcate individuals with the values, beliefs, and codes of behavior that will integrate them into the institutional structures of the larger society. In a world of concentrated wealth and major conflicts of class interest, to fulfill this role requires systematic propaganda. In countries where the levers of power are in the hands of a state bureaucracy, the monopolistic control over the media, often supplemented by official censorship, makes it clear that the media serve the ends of a dominant elite. (2002, p. 1)

In order to avoid this form of propaganda, forms of mass media must remain distributed: those who own any form of communications media are stewards of a public good, and their purposive use of that good should be highly regulated, including allowances for the public to use that good within the structure of a non-exclusive social contract. Communication is a life market – it's time for the American government to start treating it as such.

On the Humanity of Relationships

Each discipline in this paper conflicts with another in its perspective on the nature of human relationships. The methodology of linguistics gauges what people say, while

economics and political science are concerned with what people actually do. Since these behaviors can and frequently do diverge – what people say and what they do can be very different things – this analysis must address how any divergences occur, and how they affect any social and property spatial models produced. Likewise, the conflict in behaviorist and rationalist epistemologies between social economics and political science, respectively, plays a role in this determination. Since linguistics has no intrinsic facility for directed social action, the data gathered through linguistic analysis must be organized through the lens of interdisciplinarity before being applied to the domains of economics and political science. Because language and culture are so tightly intertwined yet the methodological approaches to each are so divergent, the task of focusing a picture of these human behaviors is squarely in the domain of interdisciplinary analysis.

Linguistics, economics, and political science all share an objectivist trait in their epistemologies: they concern themselves with what does happen rather than what should happen. Consequently, this analysis makes no effort to gather data on what *should* happen – this would be the jurisdiction of philosophy and religion. By focusing this analysis on behavioral and theoretical evidence, those things that should happen in order to ameliorate the problems at hand necessarily emerge from the analysis of what *actually* happens in human behavior.

In English, the phrase “our relationship” is bidirectional: the subject referent or speaker takes part in it in the same manner the object referent does. This would still be the case if “relationship” did not imply animacy, though. The phrase “our house” still refers to the relationship between the speaker, the object referent, any number of other individuals who can “own,” and a house. The word “house” refers to an inanimate object, but the majority of the relational referents of “our” will always be animate. Because of these properties, “our” will always refer to an animate being, at least in part, and consequently will always be overtly bidirectional: possessive will imply partitive, and partitive will imply possessive. The phrase “my teapot,” however, is a one-way relation: though a liberal mindset will acknowledge that possessions also possess the possessor, this subtlety is largely lost through syntactic shorthand. The phrase “my relationship” lacks semantic meaning when absent of context, as the objective referent – the nominal transitive property or *with or to what or whom* is left ambiguous. Because of these relationships, possessive constructions based on “my” lose their partitive reflection of their bidirectionality. Referring to something as “mine” will only typically imply possession, and typically an inanimate objective referent at that. If the object of this possession is human, it becomes partially dehumanized. This reflects the same pattern of language that creates modern structures of monogamy, a familiar structure of relationships in a

social space.

To most readers, marriage is a familiar structure of human relationships. Marriage itself is a concept that emerges from both a relationship between individuals and the social, and frequently also legal contract between those two. An individual cannot physically observe a marriage – it is an intangible, reified relationship – but the term allows unambiguous discussion of the relationship between two spouses. In the United States, these relationships often take not only the form of monogamy, but furthermore the form of "consumer based monogamy" (K. vanNamen, personal communication, March 28, 2008). When the shortest form of referring to a relationship is through a "my" construction, rather than one of the "our" constructions available in clusitivity-contrasting languages, it becomes culturally far simpler to dehumanize those relationships through propertization. When this dehumanization and propertization occurs, people are be able to "own," "obtain," "steal," "isolate," "damage," "discard," "swap," "buy," "lend," or "sell" their relationship partners without the cognitive dissonance that would otherwise tell them that their expression – dare we call it "metaphor" – is fundamentally and destructively flawed. Furthermore, in this construction of relationships, people can be "damaged goods," "used up," or "discarded" without the same necessary measure of cognitive dissonance. When a conflict between notions of possession exists without a counterbalancing

notion of partitivity, history shows the physically stronger possessor usually wins until an intellectually stronger possessor can make an appeal to humanity convince a democratic majority otherwise. Unfortunately, this treatment frequently stacks the cards towards “women as property.” In absence of democratic methods of consent and refusal, the cards are removed altogether.

Those languages that contrast clusitivity closely correlate with those cultures that eschew monogamy in favor of polygamy or polyandry, often only subduing these behaviors upon the arrival of Christian missionaries (Bragdon, 1996, p. 573; Marck, 1996, p. 229). Moreover, the cultures that socially enforce romantic exclusivity largely correspond to those languages that lack contrastive linguistic clusivity: most Algonquin, Australian Aboriginal, Polynesian, and Dravidian languages have both inclusive and exclusive forms of “we” (Haas, 1969, pp. 4-5). Algonquin (Bragdon, 1996, p. 577), Australian Aboriginal (Robinson, 1997, p. 303), and Polynesian (Marck, 1996, p. 244; Sahlins, 1963, p. 291) societies are widely studied for their encouragement of polygamous and polyandrous behaviors while Dravidian (Yalman, 1962, p. 363) cultures also allow for multiple simultaneous marriages, though such is typically rare (p. 363). Furthermore, the remaining languages that do not contrast clusitivity frequently constructed cultures that evolved to propertize one partner of a relationship, typically the female. This propertization either occurs socially, through monogamy, or

economically, through human slavery. Relationships, as established earlier in this paper, cannot be regarded as analogs to physical property, because of the means of production upon which each are based. Whether these relationships are between spouses or between the creator of an idea and created expression, the spaces created by each form of scarcity are not fully interoperable.

This social or economic propertization is only an unethical transgression of natural rights if it exists outside of a social contract – that is, if methods of consent and refusal are absent from the relationship - whether that relationship is involuntary. Because of this, government should make no law arbitrarily restricting human relationships in any form not governed by such a social contract. In a democratic nation, the natural right to form any sort of relationships between people should not be infringed: whether marriage, friendship, free association, or corporate partnership, any individual should not be restricted from associating in any voluntary manner with any other individual, in absence of a violation of a social contract: “if ever the social pact is violated, every man regains his original rights and, recovering his natural freedom, loses that civil freedom for which he exchanged it” (Rousseau, 1968/1762, p. 60). If a church or other society wants to restrict marriage, friendship, or any other structure of human relationships to only a pair of people of opposite sexes, of the same skin color, or with stylistically

contrasting hairdos, that is entirely within its purvey, so long as that restriction is voluntary on behalf of the restricted. The American government should not restrict the rights of free, voluntary association between individuals in any form, in absence of violation of a social contract: America is a democracy, not a theocracy. In such a democracy, one grounded in political philosophy, natural rights must take precedence over social or religious conventions: subjective judgments have only an anecdotal place in the objective epistemology of political science. Relationships are a natural right from which both language and culture emerge, and natural rights are not to be infringed upon in absence of the breach of a social contract. Since both information and conversation derive from relationships between people, any discussion of information as property needs to address these conflicts. While the right to free association should not be arbitrarily restricted, the structure of collective corporate action directly influences the ethical nature of group dynamic behavior. Because of this, and because economic behaviors can and frequently have infringed upon natural rights, the structure of economic participants must be critically examined.

On the Behavior of Corporations

The methodological divergence between economics and

political science create conflicting perspectives on the ethical function of dynamic group behavior. Because the structure of ownership of property directly affects the ethics of its exploitation, the dynamics of group behavior must be included in any interdisciplinary discussion of property. The methodology of economics concentrates on the behaviors of physical and social markets, whereas the methodology of political science is concerned with power, and the control, transfer, and use thereof. The behavior of power within political science also constitutes a type of market. Because of this, the markets of power must be examined through the lens of economics, as all market behaviors: social, physical, or power markets, have the potential to carry traits of life markets. When those traits appear, they should be regulated in order to restrict unrightful infringements on natural rights.

In a completely free market, a “stateless” one with no government intervention in any manner, some form of government naturally emerges: when people are hungry and unable to fend for themselves, their allegiance goes to those who protect and feed them. If this entity is a church, the resulting political system is a theocracy. If this is left unchecked in a completely free market, a church becomes the state. If the entity that feeds and cares for the poor is a mafia, military, or syndicate, the resulting governments are frequently called oligarchies, although this term equally applies to a theocracy. This has

happened countless times throughout history, as shown in the cases of most empires, caliphates, and kingdoms. This behavior emerges from social class, which always has and always will exist, because any relationship between two individuals will always show stratifying asymmetries in cognitive domains and personal experiences (Stayskal, 2007b). The most functional measure of a society, then, is how they treat the poor, the hungry, the widows, and the strangers in their land: this is because the emergence, and very justification for the existence of that society's government rests squarely on the shoulders of the lowest members of that society.

Because of these natural instabilities in completely free markets, America should, and in many cases already does adopt and maintain a Keynesian form of economic checks and balances, socializing traits of life markets when they emerge. Likewise because of the inherent instability in stateless economic systems, and because class naturally emerges from human evolutionary variances in risk seeking versus risk-aversive human behaviors (Stayskal, 2007b), socialism can never transform into communism: this would require a society to be both stateless and classless (Marx & Engels, 1848/1964; Mises, 1951/1962, p. 237; Mises, 1951/1962, p. 343). The space between the theories of capitalism and socialism is governed in this paper's model of free markets and life markets.

The problem of destructive corporate exploitation of

natural rights stems from the U.S. Constitution's deafening silence on the issue of privately owned corporations. This is largely because corporations as they are structured today simply did not exist when the U.S. Constitution was written (Proffatt, 1876, p. 10). Corporations, under English law, could only be formed in four ways: "Corporations by common law; 2, by authority of Parliament; 3, by the King's charter; and 4, by prescription" (p. 13). By allowing any group to exert force over another without any measure of internal democratic control, modern corporations embody the very type of tyranny against which the founding fathers of America fought and died. James Madison, one of the framers of the U.S. Constitution, recognized the traits that identified this tyranny within the overseas monarchy of the day in his *Federalist [Paper] Number 48*: "… assembling all power in the same hands, must lead to the same tyranny as is threatened by executive usurpations" (1788). This consolidation of power in the hands of only a few people – oligarchy by another name – accurately describes both the political structure of the early colonies and of modern-day corporations. Madison further established that a democratic union is a "safeguard against domestic faction and insurrection" (1787). Madison realized that tyranny stems from abuse of power, and if that power is unregulated it will overcome the best designed of democratic processes. The framers of the U.S. Constitution failed to see the unbridled power of domestic

oligarchy on the horizon in the form of laissez-faire enterprises. The closest analog to the modern corporation that existed in 1776 was the institution of banks, though the Constitution gives the power over economic capital to the national Congress. These forms of corporate tyranny emerge from their oligarchic structure, not from an inexorable aspect of the corporate nature itself. The shortcomings in economic oversight were later addressed by American implementations of Keynesian checks and balances on laissez-faire economic powers after World War II, though the tyranny of economic, social, and political oligarchy still exists in America, and is growing to threaten its citizen's voices.

The founding fathers of the United States were keenly aware of the treat of consolidation of power within a democratic nation (Madison, 1787; Madison, 1788), though the structure of modern corporations more closely resembles third-world oligarchies, theocracies, and monarchies than it resembles any form of a democratic system. Though companies have presidents and vice presidents, in the overwhelming majority of cases the employees of that company do not fill these positions through employee-based democratic voting practices. If an elected official behaves in a manner that his or her constituency disapproves, that constituency has the positive, legal right to vote for a different official at a later date. In most cases, that constituency even has the right to impeach the official for serious

ethical transgressions. Within corporations, this is not the case: employees and customers cannot directly hold presidents and CEOs accountable to their position. The closest analog is “voting with the dollar,” which fundamentally transforms the positive right to vote and impeach using the democratic process into the less powerful economic right to exchange monetized units for goods and services on a free market.

Corporate employees and customers of a company cannot impeach any officer of that corporation for unethical behavior, despite any existing cronyism through unearned year-end bonuses, poor economic performance or exploitative business practices. Some claim that this cronyism stems from “an overdeveloped sense of entitlement” while others believe that such cronyism itself may have put the executives in power (Levitt & Dubner, 2005, p. 46). Few outright deny that these behaviors exist in the executive structures of some corporations. The asymmetric power relationship emergent from artificially segmented information requires effective balancing regulation. An employee can file suit against a corporation or officer for unethical practices, but this practice only applies to extreme breaches of business ethics. This process belies consensus, and erodes the democratic process, as is clearly evident by the U.S. Congress allowing holders of valuable copyrights to write and approve their own governing laws with neither feedback nor oversight. The democratically elected Congress has bowed to the

power of the domestic economic oligarchy, and should be held accountable through voting and impeachment. Within the ethos of economic behavior, buying votes, buying elections, or buying politicians is transparently permitted. In fact, this is the only form of democracy compatible with pure laissez-faire economic practices: the democracy of the dollar. Although corporations are inherently groups of individuals, all corporations in this country enjoy a limited status as persons. Because of this personhood, corporations can act as an individual on behalf of a group of people. These democratic checks and balances within the structure of personified corporations are then required in order to balance the rights of the one with the rights of the many. If corporations are to maintain their status as persons within the United States framework of business law, those corporations require internal democratic voting, checks and balances between holders of power, and impeachment processes for violation or misuse of those powers in lock step with the same powers, responsibilities, and consequences for misuse of power as are vested in the U.S. Congress.

This analysis makes frequent mention of democracy only because it is currently the best-known method to give actionable substance to the marketplace ideas. This should be used for this purpose until a market structure is discovered that more ethically distributes power to action through such a marketplace of ideas,

allowing methods of consent and refusal to govern the purposive use of capital. The political system of consensus generation as described in Peter Gelderloos' book *Consensus: A New Handbook for Grassroots Social, Political, and Environmental Groups* presents a promising structure, though it will need to be adapted to a larger scale than it currently allows in order to be effective in modern multinational corporations and national governments.

On Information as Property

The theories of each discipline differ in their treatment of property. In linguistics, property is expressed symmetrically through possessives, partitives, benefactives, and clusives: each of these forms has a symmetric expression within the set: partitives for possessives, benefactives for the combination of these two, and clusives for the integrated purposive use of the other three. In economics, particularly social economics, these semantic relationships are partially asymmetric: much greater emphasis is placed on possession and benefaction, with little notion paid to their symmetries with partitives and clusives. In the political science view of property, only possessives and clusives are accounted for, with benefactives retaining only a shadow of their semantic meaning. These meanings have roots in an individual's cognitive domains, which become language and culture.

Most, if not all aspects of an individual's cognitive, linguistic, and social spaces are then emergent from these two fundamental constructions: ownership and membership in conversation (Jackendoff, 1999, p. 72; Teilbande, 2001, p. 335). The perceptual spaces of society and the physical world do not fully align, but can share illuminating traits. Some view property in physical spaces as a natural right (Locke, 1823/1689b, p. 161), that is a right that belongs to an individual due exclusively and inexorably to their humanity (Marshal, 1992, p. 661), while others claim that "property is robbery" (Proudhon, 1840/2002, p. 12). Proudhon here refers to the same form of property critiqued by Marx in his *Economic and Philosophical Manuscripts of 1844*: only that physical property for which profit of sale exceeds financial recompense paid to the laborer who produced it. This form of property, as previously established, is only unethical when the purposive use thereof lacks effective methods of consent and refusal.

Compensation for labor occurs through more than just economic markets: it can take the form of social capital exchange. If a missionary from the United States travels to Mexico to build an orphanage, that endeavor involves considerable outlay of financial and social capital, and also of labor. The economic recompense for that labor is vastly disproportionate to the amount of labor put in, as is the case with most forms of volunteer work. Missionaries build orphanages out

of a drive to help humanity, and are paid in *social* capital: high regard and attention of those whom they are helping, and high regard from his or her peers in that church or social group. Since these forms of exchanges can take place in both economic and social currencies, a model for those currencies should account for the conversion between the two as a dimension in a social space. When forms of property based in both spaces are organized around their similar traits, an analysis must be careful to disambiguate the features of that property along the property-spatial dimensions of animate and inanimate means of production, tangible and intangible property, and natural and positive rights.

Michael J. Meurer and James E. Bessen of Boston University performed a similar analysis on the performance of patent law when patterned after tangible property systems. In their 2008 book, *Patent failure: How judges, bureaucrats, and lawyers put innovators at risk*, they maintain that definitions of any form of property require clearly defined, natural borders (p. 3-1). Since the nature of information is relationships between people, any borders that segment that information must be artificially created and destructively enforced. The structure of the Internet, the main carrier of the digital communications modality, moreover, is also without natural borders: it is a global network whose very definition and value lies in the connections *between* computers – not the definition of the computers

themselves. Information and digital media then have common roots: both are naturally borderless, and both consequently only gain and retain value when borders are imposed upon them by bias or isolation from their native contexts. Levitt and Dubner go so far as to claim “information is the currency of the internet.” (2005, p. 61). While it is clear that attention is also a currency in digital communication, the fact is well established that information, despite its roots in intangible property and positive rights, has become the major force in trade in modern global capitalism. Information confers economic advantage to those who control it in isolation from others who want it (p. 59), which exhibits an asymmetric power differential (p. 62). Given that this asymmetry presents the same intentionally disadvantageous trade relationship discussed by Adam Smith in *The Wealth of Nations* (1776/2004, p. 316), the lawful and positive-rightful exploitation of intellectual property should remain an economic privilege, so long as the exercise thereof does not infringe upon the natural rights of another individual or group. As Larry Lessig points out, abuse of these positive rights is “piracy of the public domain” (2004, p. 220).

The phrase “public domain” refers to any social or property space that is owned by the public at large. Natural law justifies a need to differentiate between private and public physical spaces: private property is of precious little use to modern society without public roads, mail systems, and national

defense to ensure that those private spaces can enjoy purposive uses. The borders between public and private property are spatial regions rather than tangible absolutes. If an individual parks his or her car at a fruit market, that car remains his or her property, although its parking space is typically property of the fruit market. If that individual returns to the car after purchasing fruit, he or she can drive off without having to concern him or herself with the propertization of the space in which the car was parked. If that individual chooses to abandon that car because he or she would rather study crystal healing in Tibet, the fruit market has the right to protect their parking space by having the vehicle towed and stored somewhere else, with the owner of the vehicle receiving the bill for that towing and storage. With every positive or natural right comes a corresponding positive or legal responsibility: although that car is the individual's tangible property, the parking space is the fruit market's tangible property. Since the privilege of the individual's purposive use of that parking spot derives from a social contract between the individual and the fruit market, violation of the responsibility to uphold that contract results in loss of the individual's rights to that vehicle, and gain of further economic responsibility for the impounding of the vehicle. Furthermore, if that individual chooses not to fulfill his or her economic responsibility towards the impounding of the vehicle, possession of that vehicle can then be removed from them. Tangible property rights, then, are

not purely natural rights. When the social contracts governing these properties are violated, they take on an attribute of positive rights: time and space limitations.

All tangible economic property has distinct, physical borders – there are natural surfaces in physical space where that entity stops and another begins. This reflects the contrast that forms the nature of perception itself. The rights governing tangible properties are not always so clearly bordered – there will always a region in any property space in which private ownership of that entity diminishes while public ownership increases. In America, extensive bodies of criminal forfeiture, search warrant, and due process law govern these tradeoffs between public and private property ownership. Since possession of tangible property is natively a natural right, infringements upon that right must stem from a commonly understood violation of a social contract. In social spaces, these same types of tradeoffs happen between private and public ownership of intellectual property, although possession of intellectual property is natively a positive right. As mentioned previously, positive rights do not require any breach of social contract in order to erode from private possession into public domain: these rights do this naturally, as an intrinsic emergence from their nature as a reified relationship. The public domain exists to protect publicly owned intellectual property from unnatural and unrightful exploitation by private individuals who did not play a role in the creation of that

property. In this public domain, any individual can build upon that property toward new innovations, discoveries, creations, and other works of art and science: these second-layer creations are themselves intellectual property, formed as a relationship between the creator and some other intellectual property already in the public domain. This is the basis of education, critical theory, and the marketplace of ideas, and should be protected from unrightful exploitation by private individuals or corporations. This common good extends to the digital world (Marcum, 2001, p. 77), which is unrightfully eroded by the asymmetric perpetuation of copyright terms and the predatory corporate restriction of social pidginization through the Digital Millennium Copyright Act. Again, this public domain is necessary to protect the democratic process (Ferree, et.al., 2002, p. 289), critical culture (Agger, 1989, p. 23), and the marketplace of ideas (O'Connor, 2005, p. 3). The structures of the public domain between tangible and intangible property law operates in similar patterns, but are not treated as such by current intellectual property law.

In physical spaces, property is seen as a right, regardless of context: if an individual parks their car before going into a fruit market, property law in America still recognizes the ownership of that vehicle. If the car is abandoned, though, that ownership still applies. With linguistic relationships, these forms of decontextualization do not have the same effects. If someone

writes a word or phrase on a sheet of paper, the propertized aspects of that word depend partially upon the context in which it is presented: “space shuttle” and “shuttle space” have semantically different meanings expressed through syntactically different environments. The writer and reader must also share social and linguistic contexts in order to be able to differentiate the underlying cognitive territory from the linguistic map thereof: while writing “styenoi” in Russian may convey the concept of a “wall” to a Russian-speaker, the same will not be the case if the reader does not know Russian. In the intangible region of property spaces, then, context affects natural property rights: when context is missing, the natural right to that intangible property degrades, placing a measure of its possession in the public domain.

The decontextualization transfer function that governs private and public ownership of property applies to all forms of reified, intangible property, though only the possessive relationships are reflected in American intellectual property law. If an individual abandons a vehicle in a fruit market parking lot, that person’s natural right to that property erodes over time: it can be towed and impounded, and later re-sold on a free market, completely within the framework of existing American law. A person’s natural right to *any* form of tangible property exists only in the context that they are able to exert effective physical control of that property, to prevent its purposive use from infringing on

the existing natural right of another person. When the consideration of that individual's property is from that context, the property is eventually removed from private ownership into public ownership. In the case of the vehicle, that public ownership could later move back into private ownership through a free market, or it could remain in public ownership: the vehicle can be used by a government agency if the need arises.

With intellectual property, the same patterns should hold within law, but increasingly do not. A person's natural right to any form of *intangible* property exists only in the context that they can effectively control that property, likewise to prevent its purposive use from infringing on the existing natural right of another person. Since physical control of intangible property is logically impossible, any owner of intellectual property relies on *positive*, legal rights to exert this control. Recently, corporations have begun to rely on Digital Rights Management (DRM) to exert a similar form of control, but that form of control comes only from linguistic obscurity – cryptography. As has been established, cryptographic analysis is akin to language pidginization, a natural right, and should be protected by legislation. The Digital Millennium Copyright Act actually *restricts* this practice, in an attempt to allow digital content creators to create artificial boundaries in intangible property spaces. Since intangible property is inexorably derived from relationships between people, its decontextualization is

inevitable, and its value only comes through purposive use. For *anything* to be considered to be capital, it must first be a form of property, and second retain some potential for this purposive use. Because of this, when any legislation or corporate practice restricts the purposive uses of any form of intellectual property, it actually *devalues* that property. Furthermore, if that intellectual property is abandoned: generated and purposefully used until the creator could find nothing more to do with it, the natural personal property rights to that erode as rapidly as they do in tangible space. With abandoned intellectual property, there should be an analogous process by which that property transfers into the public domain. This process is established in America by the "limited time" provision in the Constitution: intangible property *must*, at some point in its life, revert back to the public domain that ultimately helped create it in the first place. Perpetually extending copyright durations at the hands of copyright lobbyists both violate the word of the U.S. Constitution, and actively damage this public domain. Political treatment of tangible property, then, is fully symmetric: possessive rights exist only so long as partitive responsibilities are upheld. In intangible property, though, these are entirely asymmetric: possessive rights exist, but the owner of that property has no partitive responsibility to purposefully use the property. Since both possessive and partitive relationships, ownership and membership, define the cognitive structure of

property, they should be reflected in *all* bodies of capital law, not just the convenient ones.

Since conversation is a relationship, and relationships are intellectual, not physical property, the law governing property constructs in America should adapt to the erosion of both possession and partitivity when decontextualization devalues relationships in social spaces. Because of their basis in the social capital and animate means of production, Intellectual property rights should decay at the same rate at which relationships decay, if decontextualized. This decontextualization can take the form of neglect, imposition upon a non-native culture or language, time shifting, or any other form of motion along a property or social context dimension. Since the value of intangible property comes exclusively from its purposive use, and those who use intellectual property textualize those who produce it, the economic relationship between valuation of the two forms of property is actually inverted: intangible property, including all forms of social capital *increases* in value the more it is used whereas tangible property, including all forms of physical capital *decrease* in value through the same kinds of voluntary, purposive use.

Decontextualization and artificial limitations on the use of intangible property both devalue it as a form of capital, but the use of intangible property *requires* its decontextualization: only the author of a book can read that book as the author, and only

the composer of a piece of music can perform that music as the composer. Any further use of that intangible property, be it a text or a piece of music, requires the reinterpretation of textuality. Because of this necessity for interpretation, the only form of value that remains in intangible property or any other form of social capital is its purposive use, and that purposive use always takes the form of a relationship between people. Recorded music actually increases in value when it is shared, as does any other form of intellectual property. Ethical business models around the production and distribution of intellectual property are not, then, based in some antiquated remake of the physical property system by which boundaries must be artificially created between people and expressions: socially constructive business models find ways to capitalize on intellectual property through analogs in physical space, particularly if those analogs have social purposes.

Because of these traits, Paul Sweeting recently declared at policy symposium, “If you have a business model based on copyright, forget it” (P. Sweeting, as cited in Lora, 2008). He goes on to claim that “copyright is dead” as a business model, suggesting that the content creators try to control the conduits through which creative digital content is delivered (2008). This practice could not be more destructive: control of the conduit is control of the conversation, and conversation is both a natural right and a public good. Information and knowledge *can* be private goods, but only if there are mechanisms in place for

consent and refusal of involuntary control – and, even then, the privacy of those goods expires through social use.

On July 15th, 2007, the musical artist Prince chose to exclusively give away almost three million copies of his latest CD, *Planet Earth*, in newspapers spread across London (Farouky, 2007). By conventional wisdom, the ubiquity over which he spread that intellectual property should have so greatly devalued it that it would have been close to worthless. What ended up happening was the opposite: he later "… announced 21 consecutive London concert dates — and sold out every one of them (Tyrangiel, 2007). Radiohead performed a similar maneuver in 2007, releasing their latest album, *In Rainbows*, with no price and no label, exclusively online (2007). Both of these artists realize the value in music – it is a form of social capital. If they give away the CDs, effectively giving away the intellectual property, that process builds social relationships between themselves and their fans. When these relationships multiply, those fans will be will to pay for derivatives that still fulfill a social purpose. Music businesses can capitalize not just on concerts, with the social purpose of bringing fans together, but also on any other form of expression that brings people together along common interests. The vast majority of digital music lacks this purpose because portable music players overwhelmingly lack speakers, and music is culturally confined to personal spaces in America. Because of this, if Steve Jobs wants to increase the

sale of digital music, all he has to do is put a speaker on the iPod. Digital music is intellectual property, which is a type of social capital. In order for capital to have value, it must have use within that form of property space: physical capital requires potential for physical uses, and social capital requires potential for social uses. When all contractually legal uses of intellectual property perpetuate social isolation and anomie, that intellectual property will eventually become worthless through its limited use.

The effective business model around any form of intellectual property, then, *actively encourages* its social use through the freedom to sharing, copy, perform, or adapt that work into something greater than itself. The social capital remains with the author of the work, and that capital can be extended into physical spaces in order to profit. Though music fans seldom see the *physical* value in purchasing a CD that they will most frequently enjoy in cultural isolation, they still see the *social* value in concerts, ring tones, t-shirts, hats, stickers, and any other form of physical property that can connect them to other fans of that work because of the social capital built up in the author of the work itself. Chris Anderson reviews more constructive social business models in *Free! Why $0.00 is the Future of Business* (2008), and Kevin Kelley has written extensively on the structure of these models at *Better than Free* on *Edge: The Third Culture* (2008).

The most valuable asset of a record label is not the music

it sells - it is the people who write and perform that music. Similarly, the most valuable asset of any company is not its brands, patent portfolio, or products: it is the people producing those brands, researching towards those patents, or engineering, testing, documenting, and producing those products. Humanity is the only sustainable investment.

Conclusion

The purpose of this paper, again, is to outline and justify necessary and sufficient regulations on intellectual property and its underlying social markets by constructing an interdisciplinary model of the sociolinguistic behavior of these markets as conversation. The spatial models presented in this paper fulfill the second purpose of this paper: constructing an interdisciplinary model of the sociolinguistic behavior of these markets as conversation. The further analysis and integration within that model fulfill the first purpose: to outline and justify necessary and sufficient regulations on intellectual property and its underlying social markets. The scope of this paper is the effects of propertizing of information within the domain of the United States, though this paper draws from and integrated with linguistic, economic, and political theory worldwide. While concerns of what *should* occur in human behavior is entirely within the purview of philosophy and religion, scientific analysis within the objectivist epistemologies of linguistics, economics, and political science is solely concerned with what *does* occur within those behaviors. No analysis or model can be completely objective any more than it can be complete: the main claim of

this approach is to be more objective and more holistic than single-disciplinary approaches. By maintaining epistemological consistency within the chosen disciplines, the linguistic, economic, and political philosophy created can remain substantially free of bias so long as the theories and data analyzed are themselves also minimally biased. Since this is inherently complex, and no single-disciplinary approach has been able to fully address it, this analysis and further interdisciplinary analysis are clearly needed (Repko, 2005, pp. 88-90).

The integrative analysis of human behavior addressed the shortcomings of a rationalist assumption by proposing a behaviorist assumption: most human behaviors are neither entirely rational nor entirely emotional. This allows human behaviors to be modeled as market behaviors, and those market behaviors as movements along curves in interconnected conceptual subspaces. In this model, physical and social capital can clearly be exchanged, though typically at marked losses in each transaction. This further draws the line of ethical behavior by distinguishing traits of life markets from those of free markets, and the necessary governing regulations on each. Because any market behavior can have traits of both, all human behavior must be systematically analyzed for involuntary infringements on natural rights in absence of violation of a social contract: it is this analysis that determines which markets must

be socialized, life markets, and which should remain unfettered by government regulation, free markets.

In order to make this claim, though, the ethics of capital are examined next. Not all political and economic theorists agree on the ethical nature of capital: this is one of the most profound and destructive disconnects between capitalist and socialist theory. This is addressed by modeling capital as point in property space, placed along three dimensions: animate and inanimate means of production, tangible and intangible property, and natural and positive rights. Ethical forms of capital are those points in property space corresponding to either an inanimate means of production, or an inanimate means with no involuntary infringement on natural rights. The position of those points on the axis of tangibility determines how the derivative rights degrade over time: intangible property degrades at an inverse relationship with time, which is increased by decontextualization. Tangible property maintains its value over time, which is then only decreased by decontextualization.

For any notion of “voluntary” to exist, the nature of public goods must be examined in order to distinguish how methods of consent and refusal allow for these ethical uses of capital. Not all political theorists agree on notions of common good for intangible properties. Some claim that all intangibles are public good whereas others claim that they begin as private goods, and only become public through time, decontextualization, or

abandonment. To address this conflict, private and public goods are modeled as an axis in property space, and a case is made and defended that information is not always a public good. Any medium of communication is a public good that constructs life markets, though, and should be treated as such due to its grounding in social capital and relationships.

Because communication comes from relationships, the humanity of relationships is analyzed next. The clusivity of language is correlated with the respect of natural rights, though it is useful to recall that the lack of this feature does not restrict a conceptual space, it simply biases it. One type of human relationship, marriage, is then examined for consistency within this theory. Because of these conclusions, the case is made that democratic governments, when grounded in epistemologically objectivist political theory, should not restrict the rights of any free, voluntary association between individuals in any form, in absence of violation of a social contract. Whether these are friendships, marriages, corporate partnerships, or any other form of relationship, no government has the ethical authority to limit any aspect of that relationship, including their number, style, or strength in absence, again, of violation of a social contract. Because unrestricted relationships build free association and communications, the *marketplace of ideas*, they are required for the construction of an effective democracy.

In order for human behaviors to peacefully coexist with the

behavior of corporations, which are emergent, dynamic forms of human behaviors, corporate structure is required in order to clarify the ethical practices of modern businesses. The case is made that the ethics of corporate behavior are not parallel to the same behaviors in humanity because modern corporations consolidate power in the hands of only a few individuals: an oligarchic structure. Because the U.S. Constitution makes no mention of privately owned and controlled corporations, indeed, they did not exist when the Constitution was written, this oligarchic structure is compared against the political theory that went into the construction of the Constitution. Through this analysis, the observation holds that the same democratic structure seen in the U.S. Government should be required to be reflected in privately owned corporations. This retains the methods of consent and refusal that are absolutely necessary to establish the ethical nature of capital, and forms the last step by which capitalist and socialist theory can finally sit at the same table, look at the same map, and see the same territory. It is through this common ground that a more holistic understanding of information as property is constructed.

The final section of analysis concerns information as property. It begins by addressing the asymmetries in economic and political treatments of property by presenting exchange theory with a behaviorist epistemology, and modeling market behaviors as exchanges of any form of capital: social or physical.

The analysis continues by touching on the destructive nature of artificial boundaries in social space, and underscoring the need for a functional public domain into which private ownership of intangible property must eventually pass. The analysis ends by suggesting alterations to current business models surrounding intellectual property, and establishing the nature of the valuation of each form of capital as the purposive use of that corresponding form of capital: social capital requires social purposive use, whereas physical capital requires a physical purposive use. These two forms of capital can be exchanged, but due to the valuation patterns of each when decontextualized, this trade will always be disadvantageous to one party in the transaction. Social capital gains value through social use, whereas physical capital loses value through physical use. Since intellectual property is a form of social capital, the business models suggested are grounded in their social applications, rather than physical adaptations modeled after a “clumsy remake of the [physical] property system” (Doctorow, 2008).

The balance of intellectual property, a positive right, is to protect innovation (Lessig, 2001, p. 253) while respecting natural rights. Because of the infringements on these natural rights that emerge from the involuntary exploitation of intellectual property – a form of social capital, it is imperative that citizens of a modern, digitally networked nation know and stand up for their linguistic and cultural rights and responsibilities. Consequently,

those forms of intellectual property based on possessive and reified relationships fail to sustain the social economic investment pattern required to maintain its very definition as a private property. Because of this, the rights granted by patents, copyrights and trademarks *should* deterministically diminish when they are registered but not used in an economic or social market. This harmonizes with both the U.S. Constitution and the analysis in this paper.

Capital lacks value when decontextualized from purposive human use: for humanity to remain humane, property must retain propriety. It is simultaneously legal, natural, and ethical to own intellectual property, a form of social capital, assuming methods of consent and refusal are in place to govern its purposive use. The problems from the misuse of intellectual property can be addressed, though theory must abandon the illusion that anyone can own another person, own a relationship or own conversation.

References

Linguistics

Aissen, J. (2003). Differential object marking: Iconicity vs. economy. *Natural Language & Linguistic Theory, 21*(3), 435-483. Retrieved February 8, 2008 from JSTOR.

Allen, W. S. (1964). Transitivity and Possession. *Language, 40*(3), 337-343. Retrieved February 8, 2008 from JSTOR.

Aristar, A. R. (1991). On diachronic sources and synchronic pattern: An investigation into the origin of linguistic universals. *Language, 67*(1), 1-33, Retrieved March 20, 2008 from JSTOR.

Barker, C. (1998). Possessives, double genitives, and anti-uniqueness. *Natural Language and Linguistic Theory, 16*(4), 679-717. Retrieved March 19, 2008 from JSTOR.

Bickford, J. A. (1998). *Morphology and syntax: Tools for analyzing the world's languages.* Dallas, TX: The Summer Institute of Linguistics.

Blake, F. R. (1930). A semantic analysis of case. *Language, 6*(4, monograph 7), 34-49. Retrieved March 20, 2008 from JSTOR.

Burquest, D. A. (2006). *Phonological analysis: A functional approach* (Third Ed.). Dallas, TX: SIL International.

de Cannière, L. (1947). Grade-placement of basic essentials of French grammar. *The Modern Language Journal, 31*(8), 510-518. Retrieved March 20, 2008 from JSTOR.

Chandler, D. (2007). *Semiotics: The basics* (2nd ed.). New York: Routledge Press.

Chomsky, N. (1998). *On Language: Chomsky's classic works* Language and Responsibility *and* Reflections on Language *in one volume*. New York: The New Press.

Clark, J., Yallop, C., & Fletcher, J. (2007). *An introduction to phonetics and phonology* (Third Ed.). Malden, MA: Blackwell Publishing.

Colapinto, J. (2007, April 16). The interpreter: Has a remote Amazonian tribe upended our understanding of language?. *The New Yorker: A Reporter At Large*. Retrieved June 28, 2007 from http://www.thenewyorker.com/

Davis, B. (2000). Language and digital technology: Corpora, contact, and change. *American Speech, 75*(3), 301-303. Retrieved February 8, 2008 from Project Muse Standard Collection.

Ember, C., Ember, M., & Peregrine, P. (2002). *Anthropology.* Upper Saddle River, New Jersey: Prentice Hall.

Garrett, P. B., & Baquedano-López, P. (2002). Language socialization: Reproduction and continuity, transformation and change. *Annual Review of Anthropology, 31*, 339-361. Retrieved February 8, 2008 from JSTOR.

Gordon, R. G. Jr. (ed.). (2005). *Ethnologue: Languages of the world* (Fifteenth edition). Dallas, Texas: SIL International. Retrieved March 19, 2008 from http://www.ethnologue.com/

Jackendoff, R. (1999). *Languages of the mind: Essays on mental representation*. Cambridge, MA: MIT Press.

Johnstone, B., & Baumgardt, D. (2004). “Pittsburghese” online: Vernacular norming in conversation. *American Speech, 79*(2), 115-145. Retrieved February 8, 2008 from Project Muse Standard Collection.

Haas, M. R. (1969, January). 'Exclusive' and 'Inclusive': A look at early usage. *International Journal of American linguistics, 35*(1), 1-6. Retrieved April 6, 2008 from JSTOR.

Katz, S. (2001). Teaching articles: How students can master the French determiner system. *The French Review, 75*(2), 290-304. Retrieved March 20, 2008 from JSTOR.

Kempchinsky, P. (1992). Syntactic constraints on the expression of possession in Spanish. *Hispania, 75*(3), 697-704. Retrieved March 20, 2008 from JSTOR.

Lakoff, G., & Johnson, M. (2003). *Metaphors we live by.* Chicago: University of Chicago Press.

Lichtenberk, F. (2002). The Possessive-Benefactive Connection. *Oceanic Linguistics*, *41*(2), 439-474. Retrieved February 8, 2008 from JSTOR.

Marck, J. (1996, December). Kin terms in the Polynesian languages. *Oceanic Linguistics, 35*(2), 195-257. Retrieved April 7, 2008 from JSTOR.

McLuhan, M., & Lapham, L. H. (1994). *Understanding media: The extensions of man*. Cambridge, MA: MIT Press. (Original work published 1964).

Minsky, M. (2006). *The emotion machine: Commonsense thinking, artificial intelligence, and the future of the human mind*. New York: Simon and Schuster.

Minsky, M. (1988). *Society of Mind*. New York: Simon and Schuster.

Mitchell, W. J. (2005). *Placing words: Symbols, space, and the city*. Cambridge, MA: MIT Press.

Ordóñez, F. (1998). Post-verbal asymmetries in Spanish. *Natural Language and Linguistic Theory, 16*(2), 313-346. Retrieved March 20, 2008 from JSTOR.

Pääkkönen, M. (2004). *A social history of Black English: The FAST Area Studies Program, Department of Translation Studies, University of Tampere*. Retrieved April 6, 2008 from http://www.uta.fi/FAST/US1/P1/BE/blacken.html

Pinker, S. (2007). *The language instinct: How the mind creates language*. New York: Harper Perennial.

Shumaker, N. W. (1975). The semantics of the English 's genitive. *American Speech*, *50*(1/2), 70-86. Retrieved February 8, 2008 from JSTOR.

Teilbande, Z., Haspelmath, M. (ed.), König, E. (ed.) Österreicher, W. (ed.), & Raible, W. (ed.). (2001, March). *Sprachtypologie unt sprachliche universalien: Ein internationales handbuch* (Halbband 1). Berlin, Germany: Mouton de Gruyter, GmbH. Retrieved March 23, 2008 from http://books.google.com/

U.S. Census Bureau. (2003, October). *Language use and English-speaking ability: 2000.* Retrieved March 20, 2008 from http://www.census.gov/

Wilson, S. M., & Peterson, L. C. (2002). The anthropology of online communities. *Annual Review of Anthropology*, *31*, 449-467. Retrieved February 8, 2008 from JSTOR.

Wolfram, W. (2004). *Urban African American Vernacular English: Morphology and syntax*. In Kortmann, B. (ed.), Schneider, E. W. (ed.), Burridge, K. (collab.), Mesthrie, R. (collab.), & Upton, C. (2004, December). A handbook of varieties of English: A multimedia reference tool (Volume 1, pp. 319-340) [Electronic Version]. Berlin, Germany: Mouton de Gruyter, GmbH. Retrieved March 23, 2008 from http://books.google.com/

Yalman, N. (1962, June). The structure of the Sunhalese kindred: A re-examination of the Dravidian terminology. *American Anthropologist, 64*(3, part 1), 548-575. Retrieved April 7, 2008 from JSTOR.

Economics

Agger, B. (1989). *Fast capitalism: A critical theory of significance*. Chicago: University of Illinois Press.

Anderson, C. (2008, February 25). Free! Why $0.00 is the future of business. *Wired magazine*. Retrieved March 23, 2008 from http://www.wired.com/print/techbiz/it/magazine/16-03/ff_free

Anderson, C. (2006). *The long tail: Why the future of business is selling less of more*. New York: Hyperion.

Ariely, D. (2008). *Predictably irrational: The hidden forces that shape our decisions*. New York: Harper Collins.

Benkler, Y. (2006). *The wealth of networks: How social production transforms markets and freedom.* New Haven, CT: Yale University Press.

boyd, d. (2007). Viewing American class divisions through Facebook and Myspace. *Apophenia*. Retrieved February

26, 2008 from http://www.danah.org/papers/essays/ClassDivisions.html

Cowen, T., & Kroszner, R. (1989, May). Scottish banking before 1845: A model for laissez-faire?. *Journal of Money, Credit, and Banking 21*(2), 221-231. Retrieved April 27, 2008 from JSTOR.

DiMagio, P., Hargittai, E., Neuman, W. R., & Robinson, J. P. (2001). Social Implications of the Internet. *Annual Review of Sociology*, 27, 307-36. Retrieved April 27, 2008 from JSTOR.

Dewald, W. G. (1972, November). The National Monetary Commission: A look back. *Journal of Money, Credit, and Banking 4*(4), 930-956. Retrieved April 27, 2008 from JSTOR.

Doctorow, C. (2008). "Intellectual property" is a silly euphemism. Guardian.co.uk. Retrieved February 22, 2008 from http://www.guardian.co.uk/technology/2008/feb/21/intellectual.property

Stayskal, D. (2007a). Post-industrial economics. *Fragmented Zen*. Retrieved February 26, 2008 from http://www.fragmentedzen.com/

Stayskal, D. (2007b). Social class and human rights. *Fragmented Zen*. Retrieved February 26, 2008 from http://www.fragmentedzen.com/

Farouky, J. (2007, July 18). Why Prince's free CD ploy worked. *Time*. Retrieved April 9, 2008 from http://www.time.com/time/printout/0,8816,1644427,00.html

Feteke, A. (2007a). Fiat currency: Destroyer of capital. *The writings of professor Antal E. Feteke.* Retrieved March 7, 2008 from http://www.professorfekete.com/articles.asp

Feteke, A. (2007b). Fiat currency: Destroyer of labor. *The writings of professor Antal E. Feteke.* Retrieved March 7, 2008 from http://www.professorfekete.com/articles.asp

George, C. H. (1957, October). English Calvinist opinion on usury, 1600-1640. *Journal of the History of Ideas 18*(4), 455-474. Retrieved April 27, 2008 from JSTOR.

Kahneman, D., & Tversky, A. (1979, March). Prospect theory: An analysis of decision under risk. *Econometrica, 47*(2), 263-291. Retrieved April 11, 2008 from JSTOR.

Kahneman, D. (2003, December). Maps of bounded reality: Psychology for behavioral economics. *The American Economic Review 93*(5), 1449-1475. Retrieved April 26, 2008 from JSTOR.

Kelley, K. (2008, February 7). Better than free. *Edge: The third culture*. Retrieved April 7, 2008 from http://www.edge.org/3rd_culture/kelly08/kelly08_index.html

Keynes, J. M. (1964). *The general theory of*

employment, interest, and money. New York: Harcourt, Inc. (Original work published 1953)

Kinsella, S. (2008). Renaming Intellectual Property. *Mises economic blog*. Retrieved March 7, 2008 from http://blog.mises.org/archives/007877.asp

Kinsella, S. (2008). Patents and innovation. *Mises economic blog*. Retrieved March 9, 2008 from http://blog.mises.org/archives/007880.asp

Kirschenbaum, A. (1985, January). Jewish and Christian theories of usury in the Middle Ages. *The Jewish Quarterly Review, New Series 75*(3), 270-289. Retrieved April 27, 2008 from JSTOR.

La Due Lake, R., & Huckfeldt, R. (1998). Social capital, social networks, and political participation. *Political Psychology*, *19*(3), 567-584. Retrieved April 27, 2008 from JSTOR.

Lindsay, D. (2002). The law and economics of copyright, contract, and mass market licenses. The Centre for Copyright Studies. Retrieved March 20, 2008 from http://www.copyright.com.au/

Levitt, S. D., & Dubner, S. J. (2005). *Freakonomics: A rogue economist explores the hidden side of everything*. New York: William Morrow.

Levitt, S. D., & List, J. A. (2008, February 15). *Homo economicus evolves*. Science 319(5865), pp. 873-969. Retrieved April 25, 2008 from AAAS.

Lora, M. (2008, March 22). “Copyright is dead”. *Mises Economic Blog*. Retrieved March 24, 2008 from http://blog.mises.org/archives/007945.asp

Lukács, G. (1971). *History and class consciousness: Studies in Marxist dialectics* (R. Livingstone, Trans.). Cambridge, MA: MIT Press. (Original work published 1920)

Marx, K. (1964). *Economic and philosophical manuscripts of 1844* (D. J. Struik, Ed. and Trans.). New York: International Publishers. (Original work published 1844)

Marx, K., & Engels, F. (1964). *The communist manifesto* (J. Katz, F. B. Randall, Eds.; S. Moore, Trans.). New York: Pocket Books. (Original work published 1848)

Mises, L. v. (1962). *Socialism: An economic and sociological analysis* (J. Hakane, Trans.). New Haven: Yale University Press. [Electronic version] Retrieved October 5, 2007 from the Mises Institute. (Original work published 1951)

Perry, M. K., & Groff, R. H. (1986). Trademark licensing in a monopolistically competitive industry. *The RAND Journal of Economics, 17*(2), 189-200. Retrieved March 20, 2008 from JSTOR.

Putnam, R. D. (2001). *Bowling alone: The collapse and revival of American community*. New York: Simon and Schuster.

Sabatini, F. (2005). *An inquiry into the empirics of social capital and economic development*. Unpublished doctoral dissertation, University of Roma La Sapienza, 2005.

Sakakibara, M., & Branstetter, L. (2001). Do stronger patents induce more innovation?: Evidence from the 1988 Japanese patent law reforms. *The RAND Journal of Economics*, *32*(1), 77-100. Retrieved March 20, 2008 from JSTOR.

Savage, J., & Kanazawa, S. (2004). Social capital and the human psyche: Why is social life "capital"?. *Sociological Theory*, *22*(3), 504-524. Retrieved April 2, 2008 from JSTOR

Schwartz, B. (2005). *The paradox of choice: Why more is less*. New York: Harper Perennial.

Shankerman, M. (1998). How valuable is patent protection?: Estimates by technology field. *The RAND Journal of Economics*, *29*(1), 77-107. Retrieved March 20, 2008 from JSTOR.

Sharp, A. M., Register, C. A., & Grimes, P. W. (2002). *The economics of social issues* (Fifteenth ed.) Boston, MA: McGraw-Hill.

Smith, A. (2004). *The wealth of nations* (C. J. Bullock, Ed.). New York: Barnes and Noble, Inc. (Original work published 1776)

Solove, D. (2008). The future of reputation: Gossip, rumor, and privacy on the Internet. New Haven, Connecticut: Yale University Press.

Taeush, C. F. (1942, Jun.) The concept of “usury” the history of an idea. *Journal of the History of Ideas 3*(3), 291-318. Retrieved April 27, 2008 from JSTOR.

Tyrangiel, J. (2007, October 1). Radiohead says: pay what you want. *Time*. Retrieved April 9, 2008 from http://www.time.com/time/printout/0,8816,1666973,00.html

Witkower, D. E. (2008). On revolutionary industry (Preliminary ed.). *Fast Capitalism, 4*(1), Manuscript submitted for publication.

Woolcock, M. (1998). Social capital and economic development: Toward a theoretical synthesis and policy framework. *Theory and Society*, *27*, 151-208. Retrieved April 27, 2008 from JSTOR.

Political Science

Bailey, J. (2008, February 12). My disappointment with Creative Commons. *Plagiarism Today*. Retrieved March 9, 2008 from http://www.plagiarismtoday.com/

Bechtold, S. (2004, Spring). Digital rights management in the United States and Europe. *The American Journal of Comparative Law, 52*(2), 323-382. Retrieved February 8, 2008 from JSTOR.

Bessen, J., & Meuer, M. (2008). *Patent failure: How judges, bureaucrats, and lawyers put innovators at risk* (Preliminary ed.). Princeton, New Jersey: Princeton University Press.

Bone, R. G. (1998, March). A new look at trade secret law: Doctrine in search of justification. *California Law Review, 86*(2), 241-313. Retrieved March 20, 2008 from JSTOR.

Boston University School of Law. (n.d.). Retrieved March 27, 2008 from http://www.bu.edu/law/faculty/profiles/fullcvs/full-time/bone_r.html

Broache, A. (2007). Google locked in legal rumbles over Gmail in Europe. *CNet News.com*. Retrieved March 20, 2009 from http://www.news.com/2102-1030_3-6161865.html

Carrier, M. A. (2002, January). Unraveling the patent-antitrust paradox. *University of Pennsylvania Law Review, 150*(3), 761-854. Retrieved March 20, 2008 from JSTOR.

Creative Commons. (2008). *Frequently Asked Questions*. Retrieved March 21, 2008 from http://wiki.creativecommons.org/FAQ

Creative Commons attribution-share alike 2.0 generic. (n.d.) Retrieved March 27, 2008 from http://creativecommons.org/licenses/by-sa/2.0/

Cohen, D. (1991, July). Trademark strategy revisited. *Journal of Marketing*, *55*(3), 46-59. Retrieved March 20, 2008 from JSTOR.

Cohen, J. E. (1998, November). Lochner in cyberspace: The new economic orthodoxy of "rights management". *Michigan Law Review*, *97*(2), 462-563. Retrieved February 8, 2008 from JSTOR.

Coombe, R. J., & Herman, A. (2004, Summer). Rhetorical virtues: Property, speech, and the commons on the world-wide web. *Anthropological Quarterly*, *77*(3), 559-574. Retrieved February 8, 2008 from JSTOR.

Copyright Act of 1976. 17 U.S.C. § 106-107 *et seq*. Retrieved April 25, 2008 from http://www.law.cornell.edu/

Dam, K. W. (1999). Self-help in the digital jungle. *The Journal of Legal Studies*, *28*(2), 393-412. Retrieved March 20, 2008 from JSTOR.

Damstedt, B. G. (2003, March). Limiting Locke: A natural law justification for the Fair Use doctrine. *The Yale Law Journal*, *112*(5), 1179-1221. Retrieved March 20, 2008 from JSTOR.

Digital Millennium Copyright Act of 1998. 17 U.S.C. § 512 *et seq*. Retrieved February 14, 2008 from http://www.plol.org/

Farr, J. (2004, February). Social capital: A conceptual history. *Political Theory, 32*(1), 6-33. Retrieved March 20, 2008 from JSTOR.

Feree, M. M., Gamson, W. A., Gerhards, J, & Rucht, J. (2002). Four models of the public sphere in modern democracies. *Theory and Society*, *31*, 289-324. Retrieved April 27, 2008 from JSTOR.

Freud, S. (1989). *Civilization and its discontents* (J. Strachey, Trans.). New York: W. W. Norton & Company. (Original work published 1930)

Gelderloos P. (2006). *Consensus: A new handbook for grassroots social, political, and environmental groups*. Tucson, AZ: See Sharp Press.

Gimbel, M. (1998, May). Some thoughts on the implications of trusted systems for intellectual property law. *Stanford Law Review*, *50*(5), 1671-1687. Retrieved February 8, 2008 from JSTOR.

Graham, P. (1999). *Heidegger's hippies: A dissenting voice on "the problem of the subject."* Identities in Action conference, Aberystwyth, Wales, United Kingdom.

Goldsmith, J., Wu, T. (2006). *Who controls the internet?: Illusions of a borderless world.* New York: Oxford University Press.

Google, Inc. (2005). *Google mail in the UK.* Retrieved March 20, 2008 from http://mail.google.com/mail/help/intl/en-GB/googlemail.html

Herman, E. S., & Chomsky, N. (2002). *Manufacturing consent: The political economy of the mass media*. New York: Pantheon.

Hobbes, T. (n.d.). *Leviathan* (R. Hay, Ed.). London: Andrew Cooke. [Electronic Version] Retrieved March 23, 2008 from the McMaster University Archive of the History of Economic Thought. (Original work published 1651)

Hunter, D. (2003, March). Cyberspace as place and the tragedy of the anticommons. *California Law Review, 91*(2), 439-519. Retrieved March 20, 2008 from JSTOR.

Jacobs, B. A. (2004). Trademark dilution on the constitutional edge. *Columbia Law Review, 104*(1), 161-204. Retrieved March 20, 2008 from JSTOR.

Klein, N. (2002a). *Fences and windows: Dispatches from the front lines of the globalization debate*. New York: Picador.

Klein, N. (2002b). *No Logo*. New York: Picador.

Ku, R. S. R. (2002, Winter). The creative destruction of copyright: Napster and the new economics of digital

technology. *The University of Chicago Law Review, 69*(1), 263-324. Retrieved February 8, 2008 from JSTOR.

Lehman, B. (1995). *Intellectual property and the national information infrastructure: The report of the working group on intellectual property rights*. Retrieved March 27, 2008 from http://www.uspto.gov/go/com/doc/ipnii/ipnii.pdf

Lemley, M. A. (2003, March). Place and cyberspace. *California Law Review, 91*(2), 521-542. Retrieved March 20, 2008 from JSTOR.

Lemley, M. A., & Volokh, E. (1998, November). Freedom of speech and injunctions in intellectual property cases. *Duke Law Journal, 48*(2), 147-242. Retrieved March 20, 2008 from http://www.jstorg.org/

Lessig, L. (2004). *Free culture: How big media uses technology and the law to lock down culture and control creativity*. New York: The Penguin Press.

Lessig, L. (2001) *The future of ideas: The fate of the commons in a connected world*. New York: Random House.

Levmore, S. (2002, June). Two stories about the evolution of property rights. *The Journal of Legal Studies, 31*(2, part 2), S421-S451. Retrieved March 20, 2008 from JSTOR.

Locke, J. (1823a). *A letter concerning toleration* (W. Popple, Trans.). London: Thomas Tegg. In *The works of John*

Locke: A new edition, corrected (Volume 6). [Electronic Version] Retrieved March 23, 2008 from the McMaster University Archive of the History of Economic Thought. (Original work published 1689)

Locke, J. (1823b). *Two treatises of government.* London: Thomas Tegg. [Electronic Version] Retrieved March 23, 2008 from the McMaster University Archive of the History of Economic Thought. (Original work published 1689)

Locke, J., & Hamel, G. P. (ed.). (2008). *The basis of property is labor.* Retrieved April 5, 2008 from http://www.wowio.com/

Lunney, G. S. Jr. (2001, September). The death of copyright: Digital technology, private copying, and the Digital Millennium Copyright Act. *Virginia Law Review, 87*(5), 813-920. Retrieved March 20, 2008 from JSTOR.

Madison, J. (1787, November 22). The federalist no. 10: *The utility of the union as a safegard against domestic faction and insurrection (continued)*. Retrieved April 7, 2008 from http://www.constitution.org/fed/federa48.htm

Madison, J. (1788, February 1). *The federalist no. 48: These departments should not be so far separated as to have no constitutional control over each other*. Retrieved April 7, 2008 from http://www.constitution.org/fed/federa48.htm

Mahoney, J. D. (2004, December). Review: Lawrence Lessig's dystopian vision. *Virginia Law Review, 90*(8), 2305-2333. Retrieved March 20, 2008 from JSTOR.

Marcum, D. B. (2001, March). Defining “common good” in the digital world. *Proceedings of the American Philosophical Society, 145*(1), 73-80. Retrieved February 8, 2008 from JSTOR.

Marshall, P. (1992, December). Two types of rights. *Canadian Journal of Political Science / Revue canadienne de science politique, 25*(4), 661-676. Retrieved April 7, 2008 from JSTOR

Matsuda, M. J. (1997). *Where is your body?: And other essays on race, gender, and the law.* Boston: Beacon Press.

Merges, R. P. (2000, December). One hundred years of solicitude: Intellectual Property law, 1900-2000. *California Law Review, 88*(6), 2187-2240. Retrieved March 20, 2008 from JSTOR.

Merrill, T. W. (2000, August). The landscape of constitutional property. *Virginia Law Review, 86*(5), 885-999. Retrieved March 20, 2008 from JSTOR.

Mill, J. S. (2004). *On Liberty.* New York: Barnes and Noble, Inc. (Original work published 1859)

Mill, J. S. (2005). *Utilitarianism.* New York: Barnes and Noble, Inc. (Original work published 1861)

Nachbar, T. B. (2004). Intellectual property and constitutional norms. *Columbia Law Review, 104*(2), 272-362. Retrieved March 20, 2008 from JSTOR.

National Humanities Alliance. (1997, September). Basic principles for managing intellectual property in the digital environment. *Political Science and Politics, 30*(3), 570-574. Retrieved February 8, 2008 from JSTOR.

Netanel, N. W. (2001, October). Locating copyright within the first amendment skein. *Stanford Law Review, 54*(1), 1-86. Retrieved March 20, 2008 from JSTOR.

Nimmer, D. (2000, January). A riff on fair use in the Digital Millennium Copyright Act. *University of Pennsylvania Law Review, 148*(3), 673-742. Retrieved February 8, 2008 from JSTOR.

O'Connor, D. (2005). Participatory processes: Creating a "marketplace of ideas" with Open Space Technology. *The Public Sector Innovation Journal, 10*(1), 1-12. Retrieved March 20, 2008 from http://www.innovation.cc/

O'Rourke, M. A. (2000, June). Toward a doctrine of Fair Use in patent law. *Columbia Law Review, 100*(5), 1177-1250. Retrieved March 20, 2008 from JSTOR.

Patry, W. (2000, Summer). Choice law and international copyright. *The American Journal of Comparative Law 48*(3), 383-470. Retrieved April 25, 2008 from JSTOR.

Peonidis, F. (1998, January). Freedom of expression, autonomy, and defamation. *Law and Philosophy, 17*(1), pp. 1-17. Retrieved March 27, 2008 from JSTOR.

Picker, R. C. (2003, Winter). From Edison to the broadcast flag: Mechanisms of consent and refusal and the propertization of copyright. *The University of Chicago Law Review, 70*(1), 281-296. Retrieved February 8, 2008 from JSTOR.

Picker, R. (2005). *Randy Picker, University of Chicago Law School*. Retrieved March 27, 2008 from http://picker.uchicago.edu/

Post, D. G. (2000, May). What Larry doesn't get: Code, law, and liberty in cyberspace. *Stanford Law Review, 52*(5), 1439-1459. Retrieved March 20, 2008 from JSTOR.

Poster, M. (2002, January). Digital networks and Citizenship. *PMLA, 117*(1), 98-103. Retrieved February 8, 2008 from JSTOR.

Proffatt, J. (1876). *The law of private corporations*. San Francisco: A. L. Bancroft and Company. Retrieved April 7, 2008 from http://books.google.com/

Proudhon, P. (1970). *What is property?: An inquiry into the principle of right and of government* (B. R. Tucker,

Trans.). New York: America Dover Publications, Inc. [Electronic version] Retrieved April 9, 2008 from http://www.blackcrayon.com/library/proudhon/ (Original work published 1840)

Radcliffe, M. F., Brinson, D. (1999). Patent, trademark, and trade secret. *Findlaw Library*. Retrieved March 27, 2008 from http://library.findlaw.com/1999/Jan/1/241479.html

Rousseau, J. (1968). *The social contract* (M. Cranston, ed. and trans.) New York: Penguin Books. (Original work published 1762)

Sahlins, M. D. (1963, April). Poor man, rich man, big-man, chief: Political types in Melanesia and Polynesia. *Comparative Studies in Society and History, 5*(3), 285-303. Retrieved April 7, 2008 from JSTOR.

Samuelson, P. (2001, September 14). Anticircumvention rules: Threat to science. *Science, 239*(5537), 2028-2031. Retrieved March 20, 2008 from JSTOR.

Shapiro, A. L. (1999, Summer). The Internet. *Foreign Policy, 115*, 14-27. Retrieved February 8, 2008 from JSTOR.

Shiva, V. (2005). *Earth democracy: Justice, sustainability, and peace*. Cambridge, MA: South End Press.

Srinivas, N. N. (2003). Monsanto patents Indian wheat gene. *India resource center: Building global links for justice*. Retrieved April 6, 2008 from http://www.indiaresource.org/news/2003/4486.html

Sonny Bono Copyright Term Extension Act § 301 U.S.C. § 17 (1998).

U.N. Universal Declaration of Human Rights, art. 3.

U.S. Const., amend. I.

U.S. Const., amend. IV, § 1.

U.S. Const., art. 1, § 8.

U.S. Copyright Office. (2006). *Copyright office basics: Circular 1*. Retrieved March 27, 2008 from http://www.copyright.gov/circs/circ1.html

U.S. Copyright Office. (2007, October). *Copyright law of the United States*. Retrieved March 27, 2008 from http://www.copyright.gov/title17/

U.S. Declaration of Independence.

U.S. Patent and Trademark Office. (n.d.). *Basic facts about trademarks.* Retrieved March 27, 2008 from http://www.uspto.gov/web/offices/tac/doc/basic/

U.S. Patent and Trademark Office. (2005). *General information concerning patents*. Retrieved March 27, 2008 from http://www.uspto.gov/web/offices/pac/doc/general/index.html

Volokh, E. (2000, May). Freedom of speech and information privacy: The troubling implication of a right to stop people from speaking about you. *Stanford Law Review, 52*(5), 1049-1124. Retrieved March 20, 2008 from JSTOR.

Wilhelm, A. G. (1999, Mar). Good fences and good neighbors: John Locke's positive doctrine of toleration. *Political Research Quarterly, 52*(1), 145-166. Retrieved March 24, 2008 from JSTOR.

Additional Sources

Berger, P. L., & Luckmann, T. (1967). *The social construction of reality: A treatise in the sociology of knowledge*. New York: Doubleday & Company.

Bharucha, J. J. (2002) Neural nets, temporal composites, and tonality. In D. J. Levitin (Ed.), *Foundations of cognitive psychology: Core readings* (pp. 455-480). Cambridge, MA: MIT Press.

Black, D. (2004, March). The geometry of terrorism. *Sociological Theory, 22*(1), 14-25. Retrieved April 7, 2008 from JSTOR.

Bragdon, K. (1996, Autumn). Gender as a social category in native Southern New England. *Ethnohistory, 43*(4), 573-592. Retrieved April 7, 2008 from JSTOR.

Burke, K. (1969). *A rhetoric of motives*. Berkeley, CA: University of California Press. [Electronic version] Retrieved April 26, 2008 from http://books.google.com/

Butler, J. (2007). Approaches to modernism. Retrieved March 23, 2008 from

http://www.tcf.ua.edu/Classes/Jbutler/T311/Modernism.htm

Calhoun, J. B. (1962, December 30). *The influence of "social velocity" on the sequence and duration of behaviors of rats*. Paper presented at Statistical Problems of Ecology conference, Philadelphia, Pennsylvania (PA).

Calhoun, J. B. (1977). *Crowding and social velocity*. From S. Arciti, & G. Chrzanowski (Eds.) (1977). New dimensions in psychiatry: A world view (Volume 2, pp. 28-45). John Wiley & Sons, Inc.

Castells, M. (2000). Toward a sociology of the network society. *Contemporary Sociology*, 29, 693-699. Retrieved February 8, 2008 from JSTOR.

Damasio, A. (1994). *Descartes' error: Emotion, reason, and the human brain.* New York: Avon Books.

Eckart, M. (2007). Classical conditioning. *Lehrstuhl für Genetik und Neurobiologie: Theodor-Boveri-Institut für Biowissenschaften, Universität Würzburg*. Retrieved April 9, 2008 from http://genetics.biozentrum.uni-wuerzburg.de/behavior/learning/classical.html

Einstein, A. (1905). *On the electrodynamics of moving bodies*. Retrieved April 25, 2008 from http://www.fourmilab.ch/etexts/einstein/specrel/www/

Izard, C. E. (1977). *Human Emotions*. New York: Springer. [Electronic Version] Retrieved April 10, 2008 from http://books.google.com

Gärdenfors, P. (2000). *Conceptual spaces: The geometry of thought*. Cambridge, MA: MIT Press.

Macdonald, A. (2008, April 6). *A survey of Geometric Algebra and Geometric Calculus*. Retrieved April 7, 2008 from http://faculty.luther.edu/~macdonal

MacCallum, G. C., Jr. (1967, July). Negative and positive freedom. *The Philosophical Review, 76*(3), 312-334. Retrieved March 24, 2008 from JSTOR.

MacLean, P. D. (1990). *The triune brain in evolution: Role in paleocerebral functions*. New York: Springer.

Naber, G. L. (1992). The geometry of Minkowski spacetime: An introduction to the mathematics of the special theory of relativity. New York: Springer-Verlag, Inc.

Repko, A. (2005). *Interdisciplinary Practice: A Student Guide to Research and Writing* (Preliminary ed.). Boston, MA: Pearson Custom Publishing.

Levine, D. S. (2002). *Introduction to neural and cognitive modeling* (Second Ed.). Matawah, NJ: Lawrence Erlbaum Associattes.

Levine, D. S. (2007). How does the brain create, change, and selectively override its rules of conduct? In R. Kozma & L. Perlovsky (Eds.), *Neurodynamics of Higher-level*

Cognition and Consciousness. Heidelberg: Springer-Verlag. Retrieved April 7, 2008 from http://www.uta.edu/psychology/faculty/levine/levine.htm

Robbins, R. H. (2006). *Cultural anthropology: A problem-based approach*. (Fourth Ed.). Belmond, CA: Thompson Higher Education.

Robinson, G. (1997, September). Families, generations, and self: Conflict, loyalty, and recognition in an Australian Aboriginal society. *Ethos, 25*(3), 303-332. Retrieved April 7, 2008 from JSTOR.

Rotman, J. J. (2003). *Advanced modern algebra* (Second printing). New York: Prentice Hall.

Sanfey, A. G. (2007). Social decision-making: Insights from game theory and neuroscience. *Science*, 318, 598-602. Retrieved November 8, 2007 from http://www.sciencemag.org/.

Schankula, H. A. S. (1980, July - September). Locke, Descartes, and the science of nature. *Journal of History of Ideas, 41*(3), 459-477. Retrieved March 24, 2008 from JSTOR.

Schutz, B. (2003). *Gravity from the ground up: An introductory guide to gravity and general relativity*. New York: Cambridge University Press. [Electronic Version] Retrieved April 25, 2008 from http://books.google.com/

Senechal de la Roche, R. (1996, March). Collective violence as social control. *Sociological Forum, 11*(1), 97-128. Retrieved April 7, 2008 from JSTOR.

Senechal de la Roche, R. (2004, March). Toward a scientific theory of terrorism. *Sociological Theory, 22*(1), 1-4. Retrieved April 7, 2008 from JSTOR.

Stern, D. G. (1995). *Wittgenstein on mind and language*. New York: Oxford University Press. [Electronic version] Retrieved April 25, 2008 from http://books.google.com

Strange, P. (1998). *Relativistic quantum mechanics: With applications in condensed matter and atomic physics*. New York: Cambridge University Press. [Electronic version] Retrieved April 10, 2008 from http://books.google.com/

Strauss, L. (1952, Oct). On Locke's Doctrine of Natural Right. *The Philosophical Review, 61*(4), 475-502. Retrieved March 24, 2008 from JSTOR.

Sunstein, C. R. (2006). *Infotopia: How many minds produce knowledge*. New York: Oxford University Press, USA.

Sutton, R. S., & Barto, A. G. (1981). Toward a modern theory of adaptive networks: Expectation and prediction. *Psychological Review* 88(2), 135-170. Retrieved April 7, 2008 from EBSCOHost.

Turchi, P. (2004). Maps of the imagination: The writer as cartographer. San Antonio, TX: Trinity University Press.

Wess, R. (1996). *Kenneth Burke: Rhetoric, subjectivity, postmodernism (literature, culture, theory)*. New York: Cambridge University Press. [Electronic version] Retrieved April 26, 2008 from http://books.google.com/

Glossary of Terms

Animacy is the contrastive linguistic and political trait of having life.

Anomie is a form of isolation caused by the lack of contextual understandings within a society.

Amelioration is the transition of some unsatisfactory condition to a satisfactory one.

Autopoiesis is the function of entities to perpetuate their existence through reproduction of their constituent parts.

A **behaviorist** epistemology is an approach to knowledge based on the assumption that human behavior is simultaneously rational and emotional.

Blocking is a behavior within human cognition through which one perception out of a pair is ignored until it begins to precede the first.

Blogging is a form of digital social media akin to the newspaper in traditional media.

Capital is any entity that represents a usable unit of value.

Chairness (as coined by the author) is a neologism that gives an example of contrast in conceptual and sociolinguistic spaces.

A **Conceptual Space** is a set of contrastive aspect dimensions with behaviors that mirror laws of particle physics.

Clusivity is a property of pronouns in some languages that can syntactically include or exclude the person being addressed.

A **Creole** language is a variety of speech that derives from a pidgin, once that pidgin is taught to a child as his or her native language.

Decontextualization is the removal of an entity from its native context.

Digital Rights Management is the practice of controlling rights in a digital medium through restrictions on the structure and use of copyrighted, patented, or trademarked material.

A **Dimension** is a component of a space that demonstrates contrast along an axis.

Discourse is the study of written or spoken communication.

False Consciousness is the loss of economic meaning that stems from economic abstraction.

Fiat (as employed by the author) is the conversion from social capital value into physical capital value. This is frequently used in economic currencies, but is present in many other disciplines.

A **Free Market** is any system of human behaviors that form a market unfettered by state regulation.

Genitive is a noun case in linguistics denoting possession, substance, and creation.

A **Gestalt** (as employed by the author) is a configuration of attributes within a system that in some manner makes it more than the sum of its parts.

An **Idiolect** is the specific expression of a language an individual employs.

Intellectual Property is a form of creative expression to which a creator has some measure of natural, private, protected rights, but more exclusive private, protected positive rights.

Interdisciplinarity is an approach to understanding based on integration of insights and theories from multiple academic disciplines.

Intertextuality refers to the relationships between written texts.

Keynesian is a type of capitalist economic system whereby markets keep minimum regulation.

Laizzes-faire is a type of capitalist economic system marked by a lack of state regulation.

A **Life Market** (as coined by the author) is any system of human behaviors that form a market using a natural right such as human life as a currency.

Mnemotechnics is the study of memory.
Modernity refers to recent times, typically beginning with the onset of industrialization.

Monogamy is a marriage relationship structure whereby two people assume external exclusion.

Partitive is a type of genitive in language that represents membership of a whole.

A **pidgin** is a simplified combination of multiple mutually unintelligible varieties of speech.

Podcasting is a form of digital social media akin to radio broadcasting in traditional media.

Phylogenetics is the study of genetic change through evolution within and between species.

Possessive is a type of genitive in language that represents ownership or creation.

A **Property Space** (as employed by the author) is a subspace of conceptual space in which the only base dimensions are those contrastive elements of property theories.

Psychonomics is the integrated study of psychology within the structure of economics.

A **rationalist** epistemology is an approach to knowledge based on the assumption that all human behavior emerges from rational comparison of the merits of possible actions.

Reification is the process of creating philosophically tangible "things" out of relationships in order to observe their emergent properties.

Semantics is the study of the meanings expressed in language.

Semiotics is the study of the signs and symbols of language.

Social Genetics (as coined by the author) the study of inherited characteristics within human behaviors through socialization that parallels the propagation of ideas through social spaces.

A **Sociolinguistic Space** (as employed by the author) is a subspace of conceptual space with spanning dimensions corresponding to types of linguistic contrast.

A **Social Space** (as employed by the author) is a subspace of a conceptual space whose dimensions parallel contrastive elements of socialization.

Socialism is a political and economic theory in which central authorities regulate markets.

Socialization is the process through which a child or otherwise social novice acquires the ability to interact with a society.

Socioeconomics is the integrated study of sociology within the structure of economics.

A **Subspace** is a space itself, defined by a subset of the dimensions present in a parent space.

Syntax is the study of the grammatical and lexical structure of language.

Symmetric is a property of a relationship in which a trait exists in equal measure on both sides of the relation.

Urban Vernacular English is a distinct creole language spoken in American urban centers, formerly known as *Ebonics* and *African American Vernacular English.*

Usury is the practice of charging interest in the lending of money.

Videocasting is a digital social medium akin to television broadcasting in traditional media.

Author's Note

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