

$$\mathbf{T}^2 + \mathbf{D}^2 + \mathbf{E}^3 = \mathbf{ISCT-II}$$

A BIOCULTURAL GUIDE TO SOCIAL CONTRACT

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Abstract

Integrative Social Contracts Theory (ISCT) can be conceptually strengthened by acknowledging the Darwinian evolutionary basis of social contracts and the Deweyan pragmatic character of business decision making. Ancestral patterns of biologically-moderated communal behavior preceded and shaped the emergence and form of contemporary culturally-moderated social contracts. Broadening ISCT's theoretical base by incorporating evolutionary and pragmatic elements lessens the risks of ethnocentric and anthropocentric bias encountered by relying primarily on Western concepts of Kantian rights and Rawlsian justice.

Key terms: social contracts, Darwinian evolution, Dewey pragmatism, inclusive fitness, kin selection, social exchange, reciprocal altruism, cheater detection/punishment, modular brain, social reciprocity, mutualisms

Let **T** represent **T**om Donaldson and **T**om Dunfee; let **D** represent Charles **D**arwin and John **D**ewey; let **E** represent **E**xchange, **E**xperience, and **E**cology; and let **ISCT-II** represent an extended version of Integrative Social Contracts Theory (ISCT). This paper offers a proof of the theorem $\mathbf{T}^2 + \mathbf{D}^2 + \mathbf{E}^3 = \mathbf{ISCT-II}$. The goal is to enhance the explanatory power of the original Integrative Social Contracts Theory by placing it within a broad evolutionary context.¹

Preamble in Praise of ISCT

The Donaldson-Dunfee Integrative Social Contracts Theory (1994, 1999, 2003) is the most innovative and promising theoretical initiative in the recent history of business ethics scholarship. Compared with other current approaches—stakeholder theory, virtue ethics, corporate/global citizenship, mission/vision/values concepts—ISCT is more comprehensive, more analytically sophisticated, more socio-culturally grounded, and more managerially operational.

- ISCT is based upon a **comprehensive interdisciplinary theoretical structure** that combines and integrates core concepts from philosophy [human rights, social justice], from social science [cultural diversity, societal rule-making, reciprocal exchange], and from managerial practice [contracts, market exchange, organizational culture].
- ISCT's core **value sources** are a blend of political, religious, economic, and philosophic norms readily recognizable and generally observed in most societies. [Hypernorms, macro social contract]

- ISCT acknowledges the unavoidable existence of **cultural relativism** and the social embeddedness of **localized rule-making** within a highly diverse global economy. [Micro social contracts]
- ISCT provides a system of **procedural justice and due process** for assuring the uncoerced participation, or withdrawal, of individuals negotiating, or subject to, social exchange proposals. [Consent, voice, exit]
- ISCT's conceptual and analytic framework can be used **to provide practical guidance to organizational managers** facing ethics dilemmas in the workplace. [Moral free space, priority rules]
- ISCT accepts **the centrality of economic efficiency** needed to produce aggregate social and economic well-being; **the contractual nature of market economies**; and the widespread **implicit/informal commercial agreements** that help make such socio-economic well-being achievable. [Social efficiency hypernorm, "handshake" deals] ²

Figure 1 depicts the principal theoretical components of Integrative Social Contracts Theory: hypernorms, macro social contract, micro social contract, moral free space, authentic norms, and legitimate norms. Priority rules are not shown but are discussed later.

As Figure 1 shows, two kinds of "filters" are implicit in ISCT. Hypernorms in ISCT are treated as manifestations of Kantian rights and Rawlsian social justice principles, so that any action or belief that cannot meet that standard is filtered out and rejected as a moral justification.³

Hypernorms are also subject to a different kind of filter, namely, the moral beliefs and interpretations resident in diverse cultures that generate micro social contracts which may vary in their moral content and meaning from one society to another. However, in ISCT such potentially contradictory ethical quandaries may vary only within the limits set by Kantian/Rawlsian hypernorms. Moral free space in ISCT is equivalent to Figure 1's sociocultural filter that grants legitimacy to home-grown, socially embedded ethics practices and principles, i.e., micro social contracts. Everyday morality is then seen as emerging from a living societal context rather than simply being imposed from some remote (or even unearthly, i.e., unnatural, or "rationally" imagined) source. Seeking a fit of hypernorm and local practice then becomes a pragmatic matter resolvable in practical ways, if at all.

It is precisely at this point where overriding moral principles (hypernorms) intersect diverse sociocultural value systems that ISCT acquires a sense of behavioral reality that surely must be welcomed by corporate decision makers and policy makers plagued by the moral inconsistencies of global operations conducted across multiple societal boundaries. For that reason and others to be discussed, ISCT presents a tightly designed method of defining, clarifying, and resolving moral issues, problems, and dilemmas that arise in business.

Building on ISCT's Strengths

The purpose here is not to deal with the internal inconsistencies or conceptual lapses of ISCT that have been the subject of much discourse (*Business Ethics Quarterly* 1995; Donaldson & Dunfee 2003), nor is the need for or legitimacy of such critiques questioned. Rather, accepting ISCT as it stands, how might it be made even more useful

to business practitioners and business theorists? Can its analytic power be magnified beyond its already considerable ability to discern, parse, and resolve ethics issues in the workplace?

Two possibilities are foremost. One is a **theory of origins**. The other is a **theory of action**. For the theory of origins, the research of Darwinian evolutionary scholars is most appropriate. For the theory of action, Deweyan pragmatism will serve. When these two streams of thought are combined, their explanatory power is indeed magnified by a power of 2, hence the **D²** notation in the paper's thematic formula. Interspersed among the **D**s, one also finds the tripartite **E** cluster, as subsequently described.

A Theory of Origins

A theory of origins can identify the initiating sources, forms, and functions of human interactions that established the patterns, motives, and *raison d'être* of social exchanges between human beings. Such ancient behavioral forms of communal interaction have long sustained the evolution of modern *Homo sapiens* and (though the point is speculative) quite possibly appeared in rudimentary form among several predecessor hominid types, including *Homo neanderthalensis*, *Homo erectus*, *Homo ergaster*, *Homo habilis*, and several others who lived between 100,000 and 2.5 million years ago. *The central premise here is that modern socio-economic exchanges (social contracts) owe their logic, form, and purpose to these earlier ancestral forms of communal behavior.* Social contracts as presently understood rest upon an evolutionary base of several hundred thousand years of human and even pre-human practice. Hobbes, Locke, Rousseau, Hume, et al., though credited with “inventing” the idea of social contract, were doing little more than capturing for their contemporaries an ancient message written into the genes and brains of *Homo sapiens*. The same can be said for contemporary social contractarians John Rawls and our two Toms, Donaldson and Dunfee, the **T²** term of the paper's theorem.

Figure 2 is a graphic representation of the key **Phases of Human Communal Evolution**. Each phase located around the circular wheel is an evolved form of human interaction, and all have been confirmed by the extensive research of evolutionary biologists and evolutionary psychologists (Williams 1966, 1992; Barkow 1992; Dennett 1995; Brockman 1995). The phases may be seen as evolutionary way stations during the long development and emergence of modern human life. Each one promoted human survival prospects and in that sense each was evolutionarily adaptive. Each phase forged bonds of cooperation among humans and helped build communal life.

The chart may be read in either of two ways: (a) chronologically to depict the appearance and sequence of the phases over evolutionary time, or (b) functionally to depict the logical relationship of each phase to the others at any point of time. The arrows pointing in a clockwise direction suggest evolutionary sequencing, although it would be possible to reverse their direction without substantial harm to the communal logic involved. In other words, all phases are as “alive and well” today, functioning simultaneously to promote human bonding and communal effects, as they were during their early evolution. In a general sense only, the five phases shown on the right half of the circular wheel are the products of *biogenetic* processes, while the five phases on the left half are primarily recognizable as products of *biocultural* processes. Each communal phase is summarized next, beginning with Adaptation/Reproduction.

Adaptation/Reproduction. Today's human beings are the outcome of a natural selection process that favored organic traits conducive to survival, adaptation, and reproduction (S/A/R). Survival meant (i.e., required) a metabolic ability to acquire, store, process, and use energy for life support. Adaptation meant (i.e., required) finding a place or niche within one's environment that permitted genetic potentials to be realized. Reproduction meant (i.e., required) a type of sexual reproduction capable of producing genetic variability in offspring and therefore within the species. *Homo sapiens*—today's humans—are the evolved result of this natural selection process.

Controversy continues about just how natural selection works to favor some traits and disfavor (and thus discard) others. That is, what is the organic entity on which natural selection acts: is it the *individual* organism (the phenotype), the organism's *genome* (the genotype *aka* "selfish" genes), or a *group* of organisms (family, clan, tribe, society, nation, species)? Current theory favors the individual over the group and, in some quarters, the genome is seen as shaping the individual's physical and behavioral traits in adaptive ways (Williams 1966; Dawkins 1989; Dennett 1995: 324-330; Pinker 2002: 258-259; Hammerstein 2003). However, whether the active agent is individual, gene, or group, the same evolutionary effect—survival, adaptation, reproduction (S/A/R)—is achieved.

If Figure 2 has a beginning point, it is here because all else rests upon the adaptive skills and sustainability of our collective lives as human beings.

Inclusive Fitness/Kin Selection. Growing directly out of the S/A/R activities of gene-directed individuals are two interrelated communal behavior patterns. **Inclusive fitness** means that an individual acting adaptively for its own survival needs may, in doing so, also produce similar results for others, such as may be found in clans or small hunter-gatherer bands. The individual's "fitness" (survivability and adaptability), measured by its reproductive success, may be assured and multiplied if others it closely interacts with, e.g., in cooperative hunting, also experience S/A/R success. The quality of "fitness" is inclusive of others, not limited just to a single person.⁴ Such mutually beneficial adaptive behavior can then spread via natural selection and become established among the members of a close-knit community.

Kin selection is a type of inclusive fitness that occurs among family members and that multiples the prospects of extending one's own genes, as well as those of family members, into the next generation. The closer the kinship, the greater the probability of sharing similar genes with one's relatives. Caring for one's own offspring, for siblings, for cousins, and other kin so that they, too, live on to be reproductively successful maximizes the probability that one's genes, or close copies of them, will survive beyond one's own death (Dawkins 1989; Ridley 1996).

It would be easy, but erroneous, to say that this kind of supportive behavior is consciously altruistic or intentionally beneficent. Its effects—its adaptive consequences—appear to be similar, *as if* a conscious purpose or intent were responsible for the evolutionary outcome. However, natural selection—the favoring of traits that lead to survival, adaptation, and reproductive success—has in this instance simply favored the behavioral support of closely related family members that produces such an adaptive effect. Inclusive fitness and kin selection—built-in, innate, gene-based, hard-wired types

of communal behavior—can, and do, powerfully underwrite social cooperation between humans.

Cooperation/Social Exchange. Paleontologists, evolutionary biologists, archaeologists, historians, anthropologists, and evolutionary psychologists affirm that cooperation and social exchange are inherent practices among hominid primates, including *Homo sapiens* and its evolutionary predecessors (Ruse 1979, 1985; Wright 1994). In the most basic sense, a minimum degree of cooperative interaction is necessary for sexual pairing and reproduction. Offspring, in whatever degree of helplessness they first appear, require extended care and close cooperation between parent and infant. Parental investments in offspring are one-half of a long-lasting reciprocal social exchange whose parental payoffs take the form of successful gene transmission (and thereby, generational adaptation of the species) through the children.⁵

Beyond mate choice, breeding, and birthing lie the range of problems common to human existence and flourishing, all of which call for varying degrees of cooperation and social exchange: finding food, sharing it, fending off predators (i.e., avoiding *being* food), knowing one's environment (plants, animals, weather, topography, circadian and seasonal cycles, astronomical phenomena), securing shelter, making tools, clothing, containers and finding the necessary raw materials, learning and transmitting skills proximally and generationally, dealing with illness and injury, encountering non-kin humans and interacting with them, etc. These were the earliest, most rudimentary forms of human communal behavior, necessitated and driven by survival and adaptive needs.

Social exchange, a step beyond cooperation, likely arises from the variability of environmental resources (Diamond 1998), the differential skills and traits among individuals and within groups, and the perception of how these differences might be manipulated for survival and adaptive purposes and goals. Hence, a skilled hunter's exchange of food for sex by a receptive (and hungry) female; cooperation between hunters in return for sharing the bounty; gathering and scavenging food items and sharing them with family and close kin in exchange for shelter and protection; coastal villagers exchanging fish for vegetables from inland villagers; tropical fruit and spices exchanged for iron, gold, and precious stones mined in northern climes. Some social exchanges are directly instrumental: obtaining or providing food, sex, and protection. Other exchanges serve symbolic functions: acknowledging or wielding status rank, using or acceding to power, and marking or reinforcing group membership. In all social exchanges, humans are drawn together interactively and communally. Hence, **Exchange** becomes one of the earliest components to be entered into the theorem for a revised ISCT and will be seen in many guises and forms as the discussion continues.

Reciprocal Altruism. Any system of social exchange depends on fairness in the minds of the exchange partners. Once the exchange has been completed, each side needs to feel it was worthwhile, i.e., “just,” “fair,” “balanced,” “equitable.” This is true whether one seeks instrumental or symbolic benefits from exchange. Such reassurances are more likely when the exchange is between family members (kin selection) and, to a lesser extent, between more distantly related clan and tribal members (inclusive fitness). Exchange in this sense is serving two important functions: contributing to the

survival/adaptive/reproductive (S/A/R) needs of the exchange partners and doing so in a way that preserves the advantages and security of gene-based communality.

Reciprocal altruism takes the principle of fairness in social exchange a large step beyond the adaptive bonds forged through family ties and clan-tribal membership, by extending the idea to include social exchanges among non-kin strangers. Here, as we shall subsequently see, is the natural seedbed from which the idea of “social contract” grew but only long ages after reciprocating exchanges became embedded by natural selection in the ancestral behavior of hominid primates. Reciprocal altruism is a radical idea: that in an exchange transaction an individual will consciously extend benefits to an unrelated stranger in ways detrimental to one’s own immediate well-being. That seems to contradict the very idea of fairness or balance in exchange, as well as the previously established idea that natural selection favors foremost those traits that enable a *single individual* to survive, adapt, and reproduce.

A key to the puzzle is the way evolutionary biologists define “altruism,” although this does not mean that mere definitional cleverness wins the day. To them, altruism means nothing more nor less than promoting the reproductive interests of someone else while simultaneously diminishing one’s own reproductive prospects. That is what looks and sounds like a *very large munificent act of kindness*—but it is nothing of the sort. That would be the way philosophers think of altruism, as consciously intentional beneficent acts. So, how do evolutionary biologists get out of this seemingly contradictory spot? They do so by pointing out that a “kind” but costly act is expected to be reciprocated by the beneficiary *in the future*. In the logic of social exchange, that would be “fair.” Reciprocal altruism thus produces a fair exchange of favors that enhances the life prospects of *both* exchange partners, even if they are total strangers. If natural selection were to favor this kind of behavior (because it supports survival, adaptation, and reproduction), it would then spread throughout the population and become yet another phase of communal evolution.

And so it apparently has done just that, for both theory and research strongly support the idea. This is not the place to rehearse all of the pros and cons. Suffice it to say that the original hypothesis developed by William Hamilton (1964) and Robert Trivers (1971) has been repeatedly confirmed by a generation of game theorists beginning with Robert Axelrod & William Hamilton (1981), Robert Axelrod (1984), Anatol Rapoport and A. M. Chummah (1965), and most recently by researchers at universities in the United States, Germany, Switzerland, Austria, England, and other centers (Vogel 2004; de Quervain et al. 2004). Robert Wright’s *The Moral Animal* (1994) contains the single best account summarizing this research (Chapter 6, Friends). The evidence is strong and clear that the human species is hard-wired to reciprocate altruistic behavior extended to them, not just by close kin but even by strangers whom one may never see again (Cory 1999).

For doubters and skeptics, the nagging question is: How is reciprocal altruism enforced? What about free riders? Whatever happened to *caveat emptor*? Read on for the answers.

Cheater Detection/Punishment. The mechanism that enforces reciprocal exchange and reciprocal altruism is an innate neurological impulse to seek out non-reciprocators (i.e., cheaters) and punish them (Cosmides 1989; Cosmides & Tooby 1995), and to reward

cooperators who impose costs on themselves (Vogel 2004, reporting the research of Boyd, Fehr et al.). Deviants and rule-breakers may be severely reprimanded or even shunned. One type of game theory (the Ultimatum Game), played across a wide range of people from different societies, reveals a strong sense of reciprocity and fairness in distributing benefits, as well as an almost universal tendency to punish those who cheat by not reciprocating a benefit they receive. Research shows that people exact punishment even when it is costly to themselves to do so and when they will never encounter the cheater again. They are acting out the idea of reciprocal altruism and insisting that all members of their community should do the same. “Even when naturally selfish individuals are a majority, the presence of people willing to punish freeloaders can enforce social cooperation in much larger groups,” according to evolutionary biologist Ernst Fehr (quoted in Begley 2004). Finding and punishing free loaders even brings pleasure to the enforcers, as shown by the activation of brain areas that signal reward and emotional pleasure (De Quervain et al. 2004; Vogel 2004). Under these circumstances, a reputation for fairness becomes a social plus. Free loaders lose social esteem. Communal behavior is strengthened.

Sharon Begley (2004) reporting on this research says that “altruistic punishment seems to have deep neurological roots.” Indeed it does. The idea of social justice is hard-wired. To demonstrate the presence of brain circuitry that underlies and drives all of the foregoing forms of communalism, we turn first to the role and function of neural algorithms in human evolution and, following that, to the remainder of Figure 2’s phases of communal behavior.

Modular Brain/Special-Function Algorithms. At the center of Figure 2 and indeed at the core of all communal behavior one finds the modular brain of *Homo sapiens*. A modular brain is specialized to cope with the specific problems it encounters in daily life. The modules are integrated sets of neurons (nerve cells) attuned and positively responsive to perceived problems. The physical design and the sense-making traits of the brain’s neurological circuits are, like other physical features of our bodies, the result of a long, long evolution during which natural selection favored structure and behavior that preserved life through adaptation and reproduction. Form (specialized modules) followed function (survival/adaptive/reproductive success).

Today’s brain tissue is the outcome of more than 2 million years of interaction between hominid brain and environment. It is truly an ancestral brain, most recently formed into the characteristic modular circuits of *Homo sapiens* around 100,000 years ago, with little discernible architectural change since then (Tooby & Cosmides 1995; Mayr 2001). That is why it is often called a hunter-gatherer brain identical to the one possessed by those ancient peoples who lived precariously, but with marvelous ingenuity, in small groups or bands on savanna and forest lands. Their brains and ours possess the same basic circuitry, the same modular specialization, the same environmental awareness, the same overall functional design for two reasons: they have proved themselves over time by meeting natural selection’s relentless pruning of maladaptive traits, and the rate of genetic change through mutations and genetic drift has been insufficient to transform the brain’s basic architecture.

Neural algorithms are problem-solving (or in some cases, only problem-coping) routines responsive to diverse environmental cues, challenges, and opportunities

encountered by our Pleistocene Ice Age ancestors: foraging for food, kin recognition, social exchange, choosing mates, interpreting threats, channeling emotions, nurturing offspring, acquiring and using language, etc. (Tooby & Cosmides 1995; Cory 2000b; Marcus 2004). The human brain's 100+ billion neurons are clustered in functional units able to perceive, interpret, and respond to environmental signals in adaptive ways.⁶

As depicted in Figure 2, the modular brain's special-function algorithms—its specialized circuits—are the active biological agent responsible for the major phases of human communal behavior. Inclusive fitness, kin selection, social exchange, reciprocal altruism, and cheater detection/punishment are all built into the brain in the sense that each phase reflects the repeated experiences of ancestral groups whose continued survival, adaptation, and reproduction depended on these kinds of communal interactions. “It has been established beyond any reasonable doubt . . . that the basis for the closely related behaviors of reciprocity, cooperation, and altruism has been established [i.e., located] in the human genome,” according to behavioral ecologist Gerald Cory (2002a: 170).

The arrows in Figure 2 radiating outward from *Modular Brain/Special-Function Algorithms* to the various phases of communal evolution are meant to show that neural algorithms exist to activate and support these communal behaviors. *The algorithmic brain that sustained the earliest forms of human exchange and cooperation—the most rudimentary types of communal interaction—continues today to perform its ancient ancestral function, though much elaborated now by more complex cultural patterns of exchange and cooperation, to which we now turn.* Both then and now, the brain's neural circuits or modules can be considered to be the active mediator of relations between organism and environment.

Nature and Culture: Where to Draw the Line? Before moving on to discuss the other phases of communal evolution, the question of culture's role needs to be faced. As noted earlier, the phases depicted on the right side of Figures 2 are the outcome of an adaptive evolutionary process made possible and activated by the presence of a gene-based, hard-wired human brain, while those phases on the left side of the chart are commonly said to be shaped and determined largely by human culture. Is this distinction legitimate for understanding the emergence of communal behavior?

How one defines “culture” determines when it first appeared in human, or even pre-human, evolution. Does culture originate with tool-making? language ability? the use of fire? copying or mimicking behavior? a certain level of intelligence in problem solving? symbolic meanings? petroglyphs and cave art? generational transmission and accumulation of learned behavior? shared communal behavior? The answers remain elusive, and so it is with any attempt to declare a dividing line between gene-based human behavior and societal or cultural behavior.

Anthropologist Terrence Deacon (1997) emphasizes the close link between evolving brain and language, calling the result *Homo symbolicus*. Frederick (1995; 2004) argues that the rudimentary building blocks of human culture—symbol making, reasoning, perceptual awareness, and even technology—are generated within the ancestral algorithmic brain. Primatologist Frans de Waal (1996, 2001) believes some aspects of culture appeared even earlier, and continue today, among our close evolutionary kin, which if true supports the idea that “culture” is in a sense an artificial

construct imposed anthropomorphically upon an otherwise natural continuum of pre-human primate evolution.

Without question, one must acknowledge the stunning differences between ancestral forms of human behavior and the complexity, diversity, and adaptive efficiency found in (advanced) contemporary cultures. Accordingly, the *broken* arrows in Figure 2 radiating from **Modular Brain** to the communal behaviors depicted on the left side of the circle are meant to convey the presence of gene-based neural algorithms that are supportive of *societal and cultural forms* of communal behavior, which are perhaps less obviously (but no less functionally) embedded in a Darwinian evolutionary process than the behaviors on the right side of the circle. Probably the most sensible take on the question of the nature/nurture conundrum is recorded by Niles Eldredge in *Dominion* (1995) and Matt Ridley in *Nature Via Nurture* (2003) who believe it is a two-way street. Nurture (i.e., culture) is dependent upon an underlying genetic brain (i.e., nature), which simultaneously absorbs feedback signals from a protective, nurturing sociocultural environment, thus magnifying the brain's effectiveness as a survival/adaptive/reproductive entity. The dividing line, if one exists at all, is more likely a threshold or evolutionary margin lying between, and incorporating, both ancestral biogenetic communal behavior and more recently evolved socio-cultural exchange behavior mapped onto the genetic-algorithmic neural substrate.⁷

Social Reciprocity (Societal/Civilizational). One of the most pervasive features of human societies everywhere is the notion of social reciprocity—that somehow or other the relations between people should be balanced, as if behavior is being weighed in a vast scale where an action calls for an equally calibrated counteraction. Social reciprocity takes many forms and occurs in many different contexts. It may appear as formalized social norms (Gouldner 1960); as far-ranging systems of ritual exchange like the Trobriand Islanders' *kula* ceremony (Malinowski 1953); as both formal and informal gift-giving among and between various levels of social class (Mauss 1967); as ceremonial, pre-market, quasi-monetary systems of exchange (Einzig, 1948); as a way of calculating medieval just prices (Lekachman 1959); as primitive and prehistoric forms of barter, trade and exchange (Dalton 1967; Polanyi et al. 1957); as early capitalist trade (Braudel 1979); as crime and punishment (Malinowski 1951); as tit-for-tat strategy in game playing (Axelrod 1984); as a nation's balance of trade; as price equilibrium in economic theory; as fairness, or its absence, in taxation; as reciprocal gift-giving on holidays; as a tension-reducing psychological impulse: “. . . a self-interested act requires an empathetic reciprocal for balance. An empathetic act likewise requires a balancing self-interested reciprocal. This reciprocity goes back and forth many times. Without the reciprocal, tension builds, stress accumulates, and either confrontation or withdrawal results” (Cory 2000: 398).

One effect of these many kinds of reciprocating behavior is to conserve, or if possible freeze in place, interpersonal, social, class, economic, and political relationships. Tit-for-tat keeps everyone in place. Another result is to fashion a notion of reciprocal fairness and justice that suffuses wide realms of human culture. At some point in hominid evolution, or perhaps at many different points of time and place, communalism (sharing) came to mean reciprocal fairness in dealing with one's life companions, whether in family, clan, tribe, polity, or civil society. When that transient, shifting

threshold was crossed, it became possible for the human algorithmic brain to draw upon eons of evolutionary experience in moderating human relationships and to begin to formulate what we now call “social contracts.”

SOCIAL CONTRACTS (Cultural Forms). Contemporary social contracts of any kind or form—whether formal or informal, written or implicit, enforced by law or by custom, domestic or international, civil or economic—rest on an evolutionary base of social reciprocity moderated by an algorithmic brain, as depicted in Figure 2. Frederick & Wasieleski (2002) have proposed five major features of evolutionary social contracts that are found in any and all such instruments, regardless of societal or cultural origin or placement, and those five traits closely track the picture presented above and in Figure 2. They hypothesized that a social contract is (1) a social exchange relationship, (2) sustained by adaptive biosocial processes, (3) moderated by social exchange neural algorithms, (4) motivated by self-seeking personal and/or group advantage, and (5) bound, channeled, and constrained by reciprocal expectations and obligations.

However, the contract’s *precise* form, content, terms, psychological/emotional expectations, interpretation, enforcement provisions, and penalties for breach of contract, as well as the types of contractors involved, are all a function of the particular societies and cultures in which such contracts are drawn up and agreed to. Each will reflect in some degree that society’s prevailing and dominant value systems, social norms, fair-play rules, and relevant laws. This sociocultural embeddedness is acknowledged in Integrative Social Contracts Theory, mainly through the concept of micro social contracts.

All modern (cultural) ideas of social contract have appeared only at the near end of a long period of human evolution. As Johnnies-come-lately, they date principally, at least in Western thought, only from the 17th and 18th centuries, reflecting the values, times, and views of Enlightenment philosophers. Even the updated versions, such as that of John Rawls (1971), continue mainly in this same tradition, carried along principally by the theorizing of philosophers and social scientists. Until ISCT (1994; 1999) and anticipatory forms of it (Donaldson 1982) appeared, social contractarians have been mainly interested in civil/political contracts between citizens and the state, and most examples of social contracts, whether actual or imagined, have been discussed in that political context.

ISCT’s inventors have departed from this tradition by applying the idea to the modern business corporation and to life in a market economy, although as legal scholar (Dunfee) and philosopher (Donaldson), they remain attached to the older tradition. It may be gain enough that they have boldly struck out in a new direction. What they have not accomplished, though, is to incorporate the long history of human communal experience into their concept of social contract. Were they to do so, ISCT would be a far more powerful argument for the kind of reciprocal justice they seek in a market economy dominated by large corporations. No longer would they need to rely on mere “reason” exercised by imaginary “rational” contractors ignorant of their central interests as the principal guarantor of social contracts, but they would instead be able to argue that a time-tested S/A/R evolutionary process has built such arrangements into our very beings.

Social contracts, in business or elsewhere, are not a modern “cultural” invention nor a mere product of Enlightenment and later thinking. Because they are natural

extrusions of the S/A/R impulse, they are not even entirely volitional. Contracting suffuses and pervades today's corporation, which would have a hard time operating otherwise. The firm is indeed a "nexus of contracts" (Jensen & Meckling 1976; Boatright 1999). The reasons are rooted in evolutionary imperatives imposed on the corporation as an economizing entity. If it is to adapt and prove its fitness in the marketplace, cooperative coalitional behavior is essential. That kind of communal action is the heart and soul of social contracting. Absent such contractual agreements, neither the corporation nor the surrounding market economy can be productive.

Social contracts embrace two functions: one is adaptive, the other is moral; both are emergent products of human evolution. This is as true of contemporary social contracts as it was of the ancient communal behaviors that preceded and ultimately spawned them. By concentrating primarily on the morality function of social contracting, ISCT tends to slight the adaptive function, although a social efficiency hypernorm hints (albeit weakly) of the need to attend to survival/adaptive/reproductive needs. More is said about each of these functions in the following two sections.

Group/Coalition Adaptive Advantage. Probably little needs to be said about the benefits stemming from the form of social cooperation that we call "social contracts." The benefits accrue to social groups and coalitions as well as to individuals. The idea is so deeply and so long buried within human consciousness as to be secure in most people's minds. What may be worth emphasizing though is that the benefits sought and obtained by social contractors—whether individuals, groups, or coalitions—are entirely a form of self gain. Social contracting is foreseen (believed) to be adaptively efficient—i.e., benefits outweigh costs—by and for each side. No common purpose, no greater good beyond this requirement need enter nor cloud the transaction (Binmore 1994, 1998). This self-gain is, of course, only a manifestation of evolutionary S/A/R traits long ingrained, as described above.

The society-wide gains of social contracting are achievable only when the self gain sought by individuals and groups is kept in check by a system of evolutionary morals, whose early (and continuing) forms are inclusive fitness, kin selection, and reciprocal altruism, now reinforced by societal rule-making and laws. There must be a convergence, a consilience, between adaptive need and moral guidance if widespread benefits are to be had.

No one has put the case for a convergence of morals and survival/adaptation more clearly or cleverly than game theorist Kenneth Binmore (1994, 1998): "The notion of a game of life and a game of morals being played simultaneously has substantial descriptive validity for the way *homo sapiens* runs his societies. It is the rules of the game of life that determines whether a particular set of behavior patterns can survive. To be viable, a social contract must therefore be an equilibrium [i.e., provide benefits to each contractor] in the game of life. . . . we often tell ourselves that we are playing the game of morals and hence choose 'fair' equilibria in the game of life. In doing so, the danger we always face is that of failing to understand the relationship that holds between the game of morals and the game of life. When playing the game of morals, it is easy to forget that it is not the game of life. This does little harm as long as we keep playing a game of morals that has evolved to be compatible with the game of life" (1994: 42).

Social contracts, even in today's highly complex societies—and also in the modern corporation—continue to be biocultural devices for coordinating the behavior of people who have need to interact with each other in adaptive ways as they play the (S/A/R) Game of Life. Binmore is telling us that socially constructed moral systems, concepts, and theories incompatible with the coevolved game of life and game of morals may end up diminishing or misdirecting the socially adaptive benefits of social contracts in modern business and society.

Ecological/Community Mutualism. The moral dimensions of human communal evolution converge in the mutualistic traits of ecological networks (E. O. Wilson 1992; Frederick 1995). Note that **Ecology** as discussed here and in the following section is one of three interrelated **E** terms of the paper's thematic formula. Mutual benefits are unquestionably enjoyed by all who reside within any given ecosystem. The benefit is life support on a larger scale than otherwise attainable. The benefit is mutually experienced—that is, shared either directly or indirectly—through the many diverse symbiotic linkages that draw living forms together in reciprocally supportive ways. Social contracts sustained by the moral logic of reciprocal altruism express the spirit of ecological mutualism. Given varying forms in modern culture, these contracts enhance the life chances of the contractors by concerting their respective interests. This is the outcome of the contracts that lace together the diverse groups (i.e., stakeholders) found in today's business firms. The Game of Life is thus propelled onward, guided by a coevolved Game of Reciprocal Morals.

Nevertheless, the human community impulse toward mutual benefit is of limited scope and compass, falling considerably (and tragically) short of embracing the whole of humanity. Species-centered behavior is rare. *Homo sapiens* is a scientific category, just as “humanity” is a literary metaphor. Neither constitutes a comprehensive concerted behavioral reality. We do not act as, or for, our species, i.e., for humanity at large. Evolution and natural selection have programmed us to act for ourselves in survival/adaptive/reproductive ways (Dawkins 1989). Our adaptive loyalties are to the groups and coalitions we identify as our adaptive helpmates (Wilson 1993; Wartik 2004), not to “humanity” as a whole. It reminds one of the waggish saying, “I love humanity. It's *people* I can't stand.” The Game of Morals does not stretch to the farthest reaches of the human species. The Game's rules, norms, and morals are about fair play in lesser realms of the overall ecosystem. Where those rules are respected and operationalized there can be great mutualistic gain for the groups and coalitions (contractors) involved. *Homo sapiens*, the sole possessor of symbolic culture, has yet to devise a species-wide moral system or code that can operationally capture the behavioral essence of ecological mutualism. The (biological) Game of Life thus far trumps the (cultural) Game of Morals.

Evolving Ecosystems. Ecological systems change through time. Their inhabitants come and go, some succeeding, others failing to meet the S/A/R test. Geological, climatological, and astronomical forces rearrange the physical landscape. Genetic mutations and genetic drift both enable and disable the best of adaptive efforts. Deadly viruses may threaten to decimate entire populations. Invader species enter other ecosystems, choking off the life prospects of long-time residents. Global warming, desertification, species-ending asteroid impacts, oceanic thermal oscillations, etc. have

the power to transform organic life on a worldwide basis. Ecosystems are seldom “balanced” but are always in transition, as their diverse but interlinked life forms are driven onward by the forces of nature—and culture too in the case of humans. The interplay of these two processes (nature and culture), neither one entirely separate from the other, alters the shape and outcome of today’s and tomorrow’s ecosystems. They set the stage for the continuing round of survival/adaptation/reproduction activities of humankind and our non-human life companions, thus bringing us back to the initial phase of human communal evolution shown in Figures 2.

ISCT and the Theory of Origins

As Figure 2 reveals, ISCT and its Western cultural progenitors appear late in the evolutionary history of social exchange and communal behavior patterns. Consequently, few social contract theories of that vintage incorporate a strongly reinforcing and affirming biogenetic infrastructure. To their credit, **T²** have recently acknowledged that “many [social contractors] are driven by an innate moral sense . . . [and] most humans are ‘hardwired’ to be ethical” (Donaldson & Dunfee 2003: 112).

If that is so, then ISCT’s norms—hyper, authentic, and legitimate—can be understood as contemporary extensions and expressions of communal behavior norms forged in the human brain during ancient ancestral times. The more recent, culturally diversified norms found in micro social contracts simply reflect the adaptive history and experience of peoples living in varying ecological circumstances who bring their pragmatic reasoning abilities (i.e., those specialized neural modules) to bear on solving problems and arranging themselves into livable relationships. **Nature’s behavioral norms** and **derivative social norms** (right side of Figure 2) are as fully expressive today as they were in ancestral times, finding their way into modern social contracts as **derivative cultural norms**. Nature’s behavioral norms are the moral cement of social contracts, whether ancient or recent.

ISCT shows some evidence of moral schizophrenia regarding the origins of norms. As Figure 1 reveals, ISCT’s norm structure is rooted in Western (i.e., Kantian and Rawlsian) concepts of reason, rights, and social justice and is then justified by identifying normative parallels among different societies, religions, and cultures whose moral principles must nevertheless pass through the Kantian-Rawlsian filter. This is a road to cultural ethnocentrism, which might be avoided by adhering to the “innate moral sense” that drives “hard wired” social contractors (Donaldson & Dunfee 2003: 112), thereby accepting **nature’s behavioral norms** as the primordial moral infrastructure of social exchange and social contracts. **Derivative cultural norms**, whether of Western or other cultural origin, may or may not be compatible with Binmore’s Game of Life. He reminds us that “the rules of the game of morals that grew up [historically] with our species are merely fictions embodied in our culture. People can and do persuade themselves and others to seek to play by different rules that are not adapted to the game of life” (Binmore 1994: 42). Until proven otherwise (by a S/A/R test), that could be true of the Kantian-Rawlsian norm foundation on which ISCT is built. The moral convergence sought and proposed by ISCT on a cluster of universalist-like norms or on a cross-cultural similarity of norms may betoken nothing more than the application of one culture’s values to all others. From this intercultural perspective, ISCT’s hypernorm-based *macro* social contract, though broadly based, may itself be only another of ISCT’s

micro social contracts, embodying norms neither recognized nor accepted by all other societies and cultures. As noted earlier, members of *Homo sapiens* rarely if ever act for the species as a whole but only for lesser segments of it.⁸

That “convergence” of morals occurs is not questioned, if one refers to intercultural/intergovernmental agreements about desirable goals to be sought along with agreed ways of reaching them, such as compacts and treaties regarding exploitation of oceanic resources, or pollution control, or traffic in human slaves, etc. (Preston & Windsor 1997). But is this really the morals *convergence* proposed by ISCT, or is it rather only the pursuit of *parallel* interests of different groups or nations whose similar experiences have led them to seemingly common moral conclusions? *Parallel* traits are worth exploring for the payoffs they may produce in the form of intercultural cooperation, e.g., placing limitations on global warming, but the negotiating parties are subject to the strictures and morals that have grown up in their respective and diverse cultures. The test of morals “convergence” is less in the aspiration than in the doing. The long-delayed Kyoto Protocol to reduce pollutants contributing to global warming, including United States repudiation of it plus the exclusion of China and India (and in spite of recent Russian compliance) makes the point: parallel but separately defined national interests, even though similar in some ways, may not add up to global morals convergence.⁹ Such potentially ethnocentric problems can be avoided or greatly minimized by incorporating an evolutionary perspective (as above) and a theory of action (to follow) into ISCT.

A Theory of Action

Now that Charles **D**arwin’s contribution to social contract thinking has been described, it is time to recognize the other **D** who is none other than pragmatic philosopher John **D**ewey. Putting the thoughts of these two intellectual giants together as **D**² adds a powerful term to this paper’s theorem for a strengthened ISCT. Dewey’s theory of action emerges directly and generically from Darwin’s theory of origins. The “action” that needs to be accounted for is business decision making and business practices as we normally understand them.

Dewey’s instrumentalist, experiential pragmatism leads one directly into the “real world” of the business practitioner by emphasizing the problem-generating, problem-coping, and problem-solving nature of the workplace. It is there where business values and norms are formed and enacted. The test is workability. The approach is experimental and open-ended: use what works, discard what doesn’t. The resultant values and norms are entirely contextual and entirely provisional until new insights emerge from newly generated workplace experiences. This kind of norm-generating, experience-based, problem-solving activity is the ground from which operational business values emerge and become behavioral guides for business practitioners (thus appears the **Experience** term in the thematic formula). These are what Dewey would call values in action, i.e., normative guides for defining, judging, and acting on problems that must be solved if, in this case, the business firm is to move ahead in performing its economizing function within human society (Rosenthal & Buchholz 2000).

In this sense, the generation of workplace values and norms bears a remarkable similarity to the survival/adaptation/reproduction process of human evolution. Both are problem-solving processes—one to economize within the firm, the other to replicate and

sustain human life. Both are generic to *Homo sapiens*. Both are directed by a modular brain whose message is the same to both: adapt, i.e., solve problems, or perish. Both produce workable norms of behavior to meet that challenge. In both contexts, cooperative coalitional arrangements emerged as the most effective, most practical, most pragmatic, most workable way to proceed. The coeval, coevolved norms of reciprocal altruism (i.e., fair, just exchange) shape this pragmatic program of problem-coping and problem-solving in both firm and human life generally.

ISCT can easily accommodate a natural, pragmatic theory of action, as Dunfee (2000: 494, 500) has said: “There is a great potential for synergy between ISCT and a naturalist approach Naturalist, pragmatic views . . . help to actualize the concepts put forth in ISCT.” It is that very actualization that opens up a rich vein of expanded possibilities for strengthening ISCT.

While much of the critical commentary directed toward ISCT deals with the inner workings of the theory—e.g., procedural hypernorms of consent and exit, priority rules, etc.—the concept of substantive hypernorms has generated the more troubling questions. **T²** have been famously evasive in declining to provide a specific list, although Dunfee (2000: 499) believes “there is only a relatively thin set of discoverable substantive hypernorms.” This awkwardness might be mitigated by adopting a Deweyan **theory of action** that can provide specific operational (workable) grounds for identifying hypernorms, while sharing **T²**’s reluctance to provide a definitive list for an ever-changing (i.e., evolving) workplace and market environment.

Recall from Figure 1 the Kantian-Rawlsian filter through which *all* norms, hyper or otherwise, must pass. As noted, this filter carries the taint of ethnocentrism *and* a hint of anthropocentrism as well. That is, the test of the most “hyper” of norms is to be found by adverting to philosophic approaches and concepts originating in and associated with Western culture and promoted by Western philosophers. Implicitly, it also runs the risk of overlooking or slighting the reciprocity-based proto-moral behavior of *pre-human* hominoids such as bonobos who though lacking consciously expressed norms act in remarkably similar ways to humans (de Waal 1996).

An alternative filter for all of ISCT’s norms—hyper, authentic, and legitimate—is the **Darwinian Survival/Adaptation/Reproduction** process that through natural selection has spawned successive phases of human communal evolution culminating in reciprocal altruism. **Nature’s Behavioral Norms** (right side, Figure 2) and the subsequent **Derivative Social Norms** and **Derivative Cultural Norms** (left side, Figure 2) are about as fundamental to the well-being and sustenance of *Homo sapiens* as any hypernorms could be. These elements bind human individuals, groups, and communities together in adaptive ways, especially as amplified by social **Exchange**, pragmatic **Experience**, and mutualistic **Ecology** (the **E³** term of the theorem). Norms that pass through this **Darwinian** filter also promote **Deweyan** pragmatic problem solving and coalition building, both vital to business economizing that sustains broad swaths of the world’s peoples. **D²** thus permits a first approximation of what **T²** have in mind in proposing a master set of essential moral norms for humanity.

But then one recalls Binmore’s moral fictions that litter human history and that are at odds with the Game of Life. Has natural selection then allowed non-adaptive or maladaptive traits to slip through the S/A/R filter? Perhaps so. In that case, how is one to distinguish fictional norms from adaptive ones? Game theorists such as Binmore

(2003) rely on enlightened self-interest played in repeated Life Games to settle on Darwinian equilibria that sustain life. However, equilibria for *individual* or *group* players may turn out to be *disequilibria* for others or for the entire *species*, thus ripping big holes in the Darwinian filter that allow all number of roguish self-promoting behaviors to pass through.¹⁰ A current/recurrent example is the adaptive and maladaptive behavior of corporate executives who on occasion do not hesitate, in the name of their own or their company's survival, to sunder the social contracts of workplace and community.

Naturalistic fallacy advocates would be correct to point out that just because Darwin's filter lets a behavioral trait slip through does not automatically imbue it with a S/A/R moral content. That depends on Dewey's pragmatic test based on experience: can human intelligence draw upon past and present experience to discern the adaptive from the maladaptive? A **D²** approach that embraces the evolved communal values and practices that support human life, and that do so from a workably pragmatic perspective, is preferable to the culturally-bounded and culturally-confined meanings given by Western culture to Kantian human rights and Rawlsian social justice.

ISCT via ISCT-II

Homo sapiens is a quarrelsome species, riven by murderous conflict, one of the few creatures to war against itself. One is tempted, as **T²** have been, to find a way out by appealing to broadly shared principles and motives having a more peaceful outcome, made potentially realizable by ISCT'S remarkably apt machinery of moral calculation and managerial decision making.

The search can be enhanced by centering attention on the communal bonding sources handed on a platter to *Homo sapiens* by natural selection. Those bonds go deeper, have been around longer, and have been tested more often by the lived experience of countless generations stretching back to our Pleistocene ancestors than can be found in contemporary culture-bound, pre-Darwinian formulations of human reason and human rights. The human moral sense that reveals itself by lighting up the screens of (f)MRI brain scans (De Quervain et al. 2004) and manifests itself in reciprocal bonding with kin and strangers sends an important signal about human possibilities. We bond, we cooperate, we contract, not to the outermost boundaries of our species but only to those edges where natural selection and lived experience drives us. Nature-based norms, reinforced by ecological awareness and sensitivity, tug the world's peoples towards common cause because, while culturally and environmentally diverse (Calvin 2002), they have all emerged from evolutionarily similar beginnings and have managed to cope successfully with common problems.

This nature-enriched view captures the advantage already present in ISCT that enables corporate managers to identify and formulate pragmatically workable responses to workplace ethical challenges and opportunities wherever encountered.

However, deeply troubling puzzles remain even for the proposed **ISCT-II**. The human modular brain houses and expresses ancestral impulses that can contradict and supervene a social contract's reciprocal morals. They can and do drive human behavior towards power, domination, aggression, fear, anger, and rage that too often find their way not just into the workplace but also into families, neighborhoods, major institutions, and national policies.

Though different in some respects (see Figure 3), both **ISCT** and **ISCT-II** recognize that the Game of Life as played by corporations (Business) and the Game of Morals as played by everyone (Society) are intertwined and partially self reinforcing. The “integration” in Integrative Social Contracts Theory refers to a hoped-for convergence, or in Edward O. Wilson’s term, a consilience, a “jumping together” (Wilson 1998: 8) of ethical standards that sustain human life in all of its cultural and ecological diversity. That kind of moral consilience, originating in Nature and elaborated by Culture, is what social contracts are all about. It is a lesson to be urgently learned by today’s corporate decision makers.

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Figure 1
INTEGRATIVE SOCIAL CONTRACTS THEORY

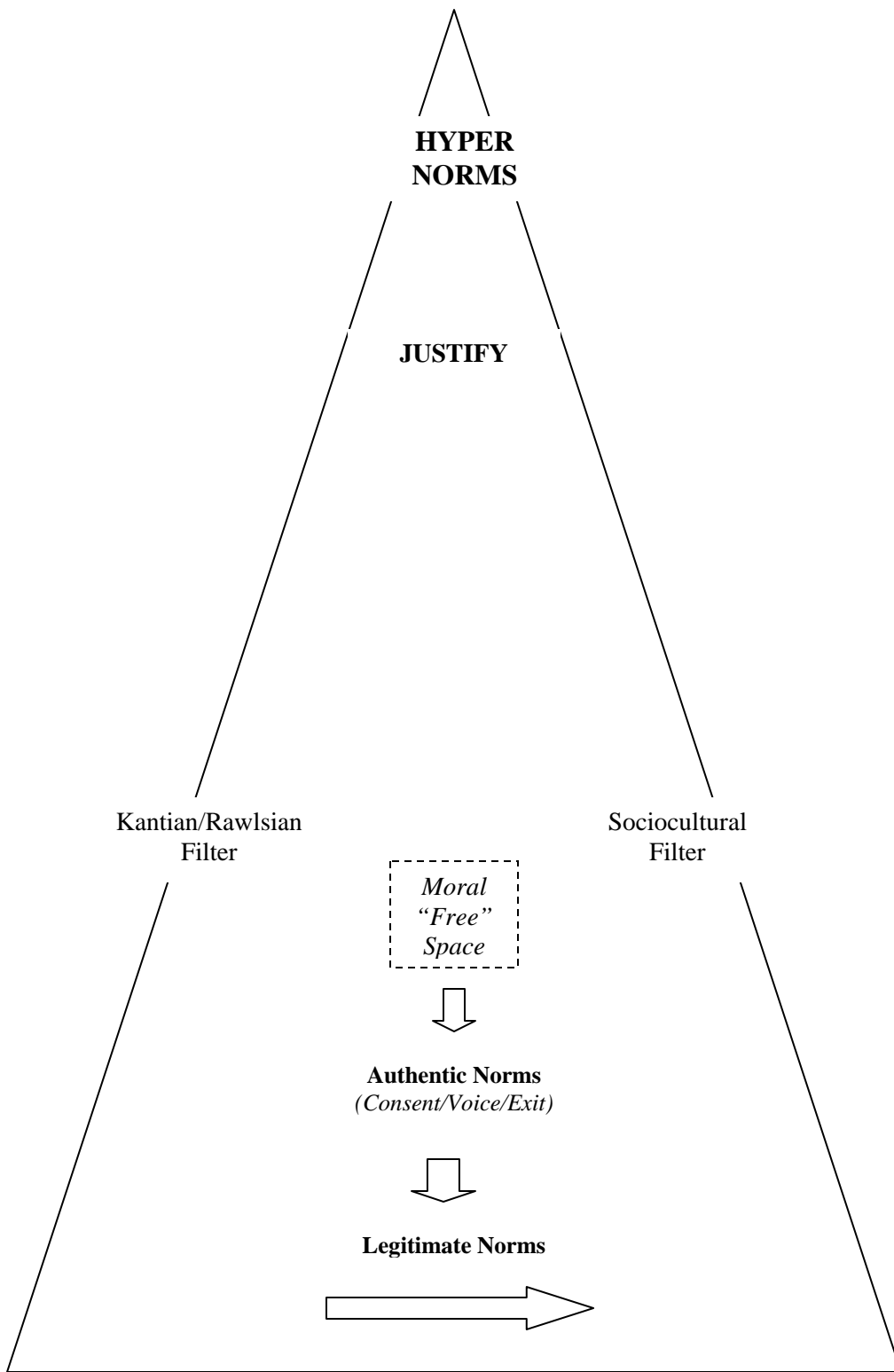


Figure 2

PHASES OF HUMAN COMMUNAL EVOLUTION

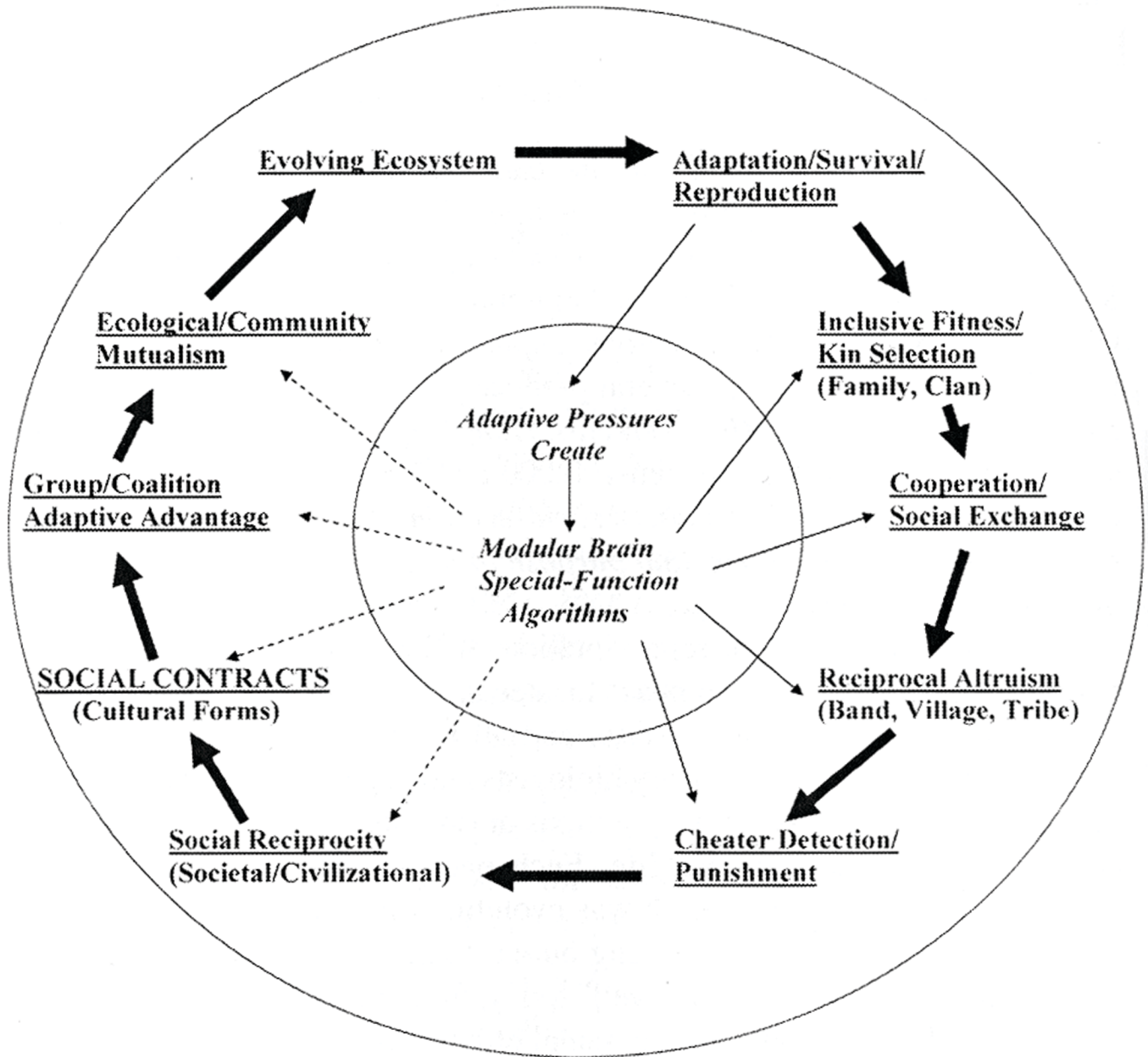


Figure 3

COMPARING ISCT AND ISCT-II

<u>ISCT</u>	<u>ISCT-II</u>
* Kantian psychology	* Evolutionary psychology
* Rawlsian justice	* Reciprocal altruism
* Culture-bound morals	* Biocultural morals
* “Rational” norms	* Pragmatic norms
* Imaginary contractors	* Actual contractors
* Ideal social contracts	* Real social contracts

ENDNOTES

¹ A revised version of a paper presented to a conference on Contractarian Approaches to Business Ethics: The Evolution of Integrative Social Contracts Theory, The Wharton School, University of Pennsylvania, November 12 and 13, 2004.

² While ISCT is more theoretically coherent than stakeholder theory, these two inquiring methods share important traits. The institutional birthplace of both theories is top-ranked elitist business schools: Penn's Wharton School (for ISCT and initially for stakeholder theory) and Virginia's Darden School (for subsequent development of stakeholder concepts). The principal supporting academic fields and the home disciplines of the principal authors are law and philosophy and, derivatively, corporate management. The philosophic rationale for both theories is Kantian rights and Rawlsian justice, with stakeholder theory claiming additionally to be strongly libertarian (Freeman & Phillips 2002). All three of these academic institutional birthmarks identify both modes of thinking as consistent with conventional mainstream cultural inquiry. Both are products of a corporatist culture, both are comfortable with the value orientations supportive of private property (Donaldson & Preston 1995), class privilege, and capitalist governance of a market economy (Marens 2004). Both offer management guidance to the principal figures—executives, directors, managers—of large-scale corporations as a way of identifying, enlarging, and enhancing the corporation's strategic economic performance. In all of these ways, it can be fairly said that dominant moral theorizing of these two inquiring traditions occurs within, and not in opposition to, the structural and ideological framework of the current business order. While none of this is surprising, given both theories' provenance, it does raise a question about the self-imposed bounds placed on this kind of moral inquiry, particularly in a global context where culture clashes are endemic and increasingly violent and where the conflicts are often said to be a product of the globalized corporatist/capitalist/managerial system itself.

Perhaps the major inherent advantage enjoyed by stakeholder theory is to be engaged in the *realpolitik* of the marketplace whereas ISCT is more inclined to abstract but more theoretically sophisticated moral analysis. Stakeholder theory has yet to articulate a theoretically coherent moral framework, but see Phillips (2003) for a step toward overcoming this theoretical shortcoming by adopting a Rawlsian analysis at an organizational level.

³ ISCT's authors believe that hypernorms "reach beyond" both Kant and Rawls to embrace a wider, global normative realm of belief and practice, but the view here is that even such broader orientations are filtered through the lens of Western cultural philosophy.

⁴ This adaptive effect is not equivalent to *group* selection because each individual member of the group is busy looking after its own survival/adaptive/reproductive interests, and that is where natural selection renders either a favorable or unfavorable result. Some individuals' actions will prove to be selective, will survive and spread through the population, while others' activities will not meet that test. It is the summed result of these *individual* activities that comprises inclusive fitness.

⁵ Adoptive parenting, surrogate birthing, sperm donation, and similar practices are a biological step removed from direct parental transmission of genes through offspring, although the generational (survival, adaptive) effect on the species is identical.

⁶ A team of Australian and Spanish researchers demonstrated that the human brain took a distinctive path from other hominoids in its journey through time. They studied brain cells and circuits in the prefrontal cortex of humans, macaques, and marmosets that govern complex functions such as comprehension, perception, and planning, which others have called "the executive brain." The physical characteristics of the neural circuits "varies markedly between cortical regions in different anthropoid genera . . . [providing] substantial evidence for the thesis that pyramidal cells, and the circuits they form, are specialized for their functional requirements" and that evolution has favored (selected) a human brain with more of such cellular connections,

more closely packed, with wider branching, and a greater facility for “comprehension, perception, and planning” than our primate cousins (Elston et al., 2001).

⁷ The modular brain with its specialized (ancestral) circuitry need not be limited to any given set of algorithms that proved to be adaptively effective for Ice Age hunter-gatherers. The appearance of symbolic culture itself reveals the remarkable expansiveness and flexibility of the human brain capable of spawning diverse circuitry responsive to diverse cultural environments. Moreover, circuits evolved for one function may be hijacked for another, e.g., recent research tells that vision circuits in blind people are re-adapted for the processing of verbal skills (*Science News* 2004).

⁸ Roger Scruton, who devotes a chapter to social contract in *The West and the Rest* (2002: 11), aptly observes that “one may reasonably wonder at the miraculous correspondence between the ‘just society’ as it emerges from Rawls’s thought-experiment and the received ideas of liberal New York,” going on to say that Rawlsian theory is “the theology of a post-religious society.” The main theme of Scruton’s brief but brilliant essay on “globalization and the terrorist threat” (the book’s subtitle) is that Western society’s values, norms, and institutional arrangements, including the social contract, are quite inadequate to comprehend or to constitute a public policy basis for dealing with present-day conflicts between “the West and the rest,” most especially the clash of Islamist and Western modernist forces. There, as in the modern corporation, using a culture-bound concept of social justice and social contract can produce mischievous results.

⁹ But see Spicer, Dunfee, & Bailey (2004) for an interesting empirical study of the comparative influence of national culture and hypernorms on the (simulated) decisions of expatriate American managers working in Russia when compared with American managers working in the U. S. Both groups adhered to hypernorms but the expatriates deferred to local Russian norms when overriding moral issues were not involved.

¹⁰ Implicit in Binmore’s concept of moral fictions dissonant with life’s requirements is that culture, not nature, is to blame. Superstitions, nonsense, myths, fantasies, mystical beliefs of all stripes, hallucinations, and the like—all produced in abundance and transmitted generationally in the history of various cultures—are likely candidates for the kinds of moral fictions that do not overlap with the Game of Life. This would be an instance of multi-level selection where *learned cultural traits*, not genes or individuals, are selected for survival, even though on other grounds such cultural traits would be either maladaptive or at least neutral in their impact. Steven Jay Gould (2002) is well known for suggesting that some features of both organic and cultural evolution are “exaptations” having neither positive nor negative impact on S/A/R. For some recent examples of multi-level selection theory, see Hammerstein (2003).