THIS VIEW OF LIFE

This View of Business: How Evolutionary Thinking Can Transform the Workplace

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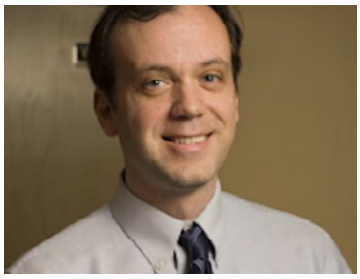

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This View of Business: How Evolutionary Thinking Can Transform the Workplace

by Mark Van Vugt, David Sloan Wilson & Max Beilby

This View of Life helps to demonstrate the value of an evolutionary perspective for many areas of society, including healthcare, sustainability, and education. Surprisingly, a domain that has yet to embrace evolutionary thinking is that of business and management.

True, metaphors and phrases such as "survival of the fittest", "creative destruction", and "firm selection" have been tossed around for decades, suggesting that evolutionary forces are at work in the business world. However, these analogies don't even begin to appreciate the complexity of business social environments or the forces of genetic and cultural evolution that shape the behaviors of all people, in and out of the workplace. Rethinking business and management from an evolutionary perspective can have profound implications at all scales, from the wellbeing of individual employees, to the performance of firms, to the creation of a sustainable global economy.

To catalyze this process, we are initiating a series of articles and interviews titled: "This View of Business: How Evolutionary Thinking Can Transform the Workplace". To inaugurate

the series, we posed the following question to a number of evolutionary thought leaders: "What is the single greatest insight that an evolutionary perspective offers to business?" Their answers give a taste of what will be explored in greater detail in the rest of the series.

We hope that this effort will go a long way toward catalyzing reforms in business education and management development. We believe that evolutionary approaches should have a prominent role in the curriculum of Business Schools as well as in allied fields such as in Management and Organizational Sciences. Likewise, we think evolutionary insights will be valuable to business leaders and other professionals, providing a toolkit for navigating the world of business.

We end with a note on the status of women in the business and management professions. We made a strong effort to include female commentators in our inaugural article but failed: First, because women are sadly in the minority among those who are thinking about business from an evolutionary perspective; and second, because those we asked were too busy—perhaps fulfilling other requests similar to ours! Luckily, in our case we will be able to correct the imbalance in future articles and interviews in the series and to address gender issues in the workplace from an evolutionary perspective.

Tinbergen's four questions and variance explained: Why business (and all behavioral science) needs evolutionary theory

by Sandeep Mishra

Understanding behavior is immensely complicated. Since the middle of the 20th century (after the modern synthesis[1]), the predominant understanding of the "sources" of behavior centered on the "nature" vs. "nurture" debate. In short, this debate is about whether behavior is best attributed to genetic inputs or environmental factors. Of course, this dichotomy has been shown time and time again to be a "straw man" argument; all behavior (and all traits) are necessarily products of complicated interactions (i.e., nature via nurture).[2] However, this debate highlights the central goal of the behavioral sciences – explaining variance in behavior. In a perfect world where we could predict 100% of all behavior, we would necessarily have a complete understanding of all the sources of variance that give rise to behavior.

What does variance explained have to do with evolutionary thinking and business? In 1963, the Nobel Laureate and well-known evolutionary biologist Nikolaas "Niko" Tinbergen posed four questions based on evolutionary thinking that would completely change how we understand behavior.[3] Each question offers a different perspective on why and/or how behavior comes to be. Two are "how" questions, about mechanism:

(1) How do proximate mechanisms give rise to behavior? (proximate explanation)

(2) How do developmental factors influence behavior? (developmental explanation)
The other two are "why" questions, about the fundamental evolutionary sources of behavior:

(3) Why did a particular behavior evolve over time? (functional/ultimate explanation)

(4) Why did evolutionary history gave rise to a particular behavior in certain species but not others? (phylogenetic explanation)

The virtue of these four questions is that it highlights that there are always multiple answers to questions about the causes of behavior. For example, we might ask, why do some birds sing? There are necessarily multiple answers: some sing because of the release of particular hormones (a proximate explanation); some sing because they were exposed to the songs of their parents

during development (a developmental explanation); some sing because individuals who sang more attractive songs had more offspring, and thus, higher biological fitness (a functional/ultimate explanation); some sing because their evolutionary ancestors branched off from non-songbirds because of natural selection or genetic drift (a phylogenetic explanation).[4] All of these explanations are complementary; together they provide a richer account of the causes of behavior.

Although Tinbergen's four questions are taken for granted in the field of behavioral ecology and ethology (where it originated), surprisingly few human behavioral scientists in any discipline (let alone business) are aware of these four questions. Fewer still actually use these four questions to guide their work. This ignorance of Tinbergen's work is highly problematic, because many of the "debates" and "controversies" in behavioral science are a product of researchers talking past each other with different explanations. Mainstream social psychology, for example, is focused on understanding proximate mechanisms that guide behavior, whereas evolutionary psychology is focused on functional questions. Neither is the "right" approach – both (along with developmental and phylogenetic explanations) are necessary to truly explain behavior fully (that is, to account for more variance in behavior)[5]. Any behavioral science—including business—that does not acknowledge, understand, and utilize Tinbergen's four evolutionary questions to guide research will simply be leaving variance left to be explained on the table, and will be fundamentally limited as a result.

Any behavioral science—including business—that does not acknowledge, understand, and utilize Tinbergen's four evolutionary questions to guide research will simply be leaving variance left to be explained on the table, and will be fundamentally limited as a result.

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Evolutionary psychology and Organization Science

by Phanish Puranam

I study how organizations work, and how to make them work better. One would think a robust theory of human behavior would be a key element of my theoretical toolkit. Unfortunately, I don't think I have one yet.

One candidate for such a theory that has enjoyed unwarranted longevity is the so called "rational choice" model - in which goals are exogenous and constant, representations are unbiased even when inaccurate, and choice processes involve maximization. Beginning with Herbert Simon, researchers in the fields of management, economics and psychology have by today accumulated an enormous body of empirical evidence that points to the gross inaccuracies of the rational choice model. So why is it still taught so widely in graduate programs in the social sciences (including management departments)?

Evolutionary psychology can help answer that most basic of questions in the social sciences- what goals do we pursue and where do they come from?

The answer is that we do not yet know what to replace it with. There is one clearly specified rational choice model. There are many ways people actually deviate from it. Which one (if indeed there is one) alternative should replace it is unclear. There are just too many degrees of freedom. Every proposed alternative to rational choice can immediately be (and usually is) criticized as being ad hoc.

This is where evolutionary psychology can come to our rescue. It restricts the space of what is possible in terms of the kinds of goals, belief structures and choice processes that humans have. Not to one each, as the rational choice approach does- but to a plausible (and hopefully, tractable) few. Most importantly, it can also explain why we have these properties.

As a working alternative to the rational choice model, many of us either implicitly or explicitly adopt some variant of the following model (I certainly do): individuals make choices that, in their

representations, increase the possibility of attaining goals that are currently salient to them. This formulation does not assume constancy of goals, accuracy of representation, or maximization of choice, which makes it seem under-defined. But from evolutionary psychology, we can learn about the set of possible goals, how and when they become salient, and the way we represent the path to their attainment. I routinely include Cosmides and Tooby's paper[1] in my graduate seminars now to help make this point.

Broader influences of evolutionary thinking on the organizational sciences exist as well. Ideas about variation, selection and retention in the domain of business competition have been developed extensively by Michael Hannan and John Freeman, Richard Nelson and Sidney Winter, and Daniel Levinthal. Methodologies, in particular computational agent based modeling and behavioral experiments are another bridge between the fields. I choose to highlight the link that I felt has been somewhat overlooked. I am hopeful that evolutionary psychology can help answer that most basic of questions in the social sciences- what goals do we pursue and where do they come from?

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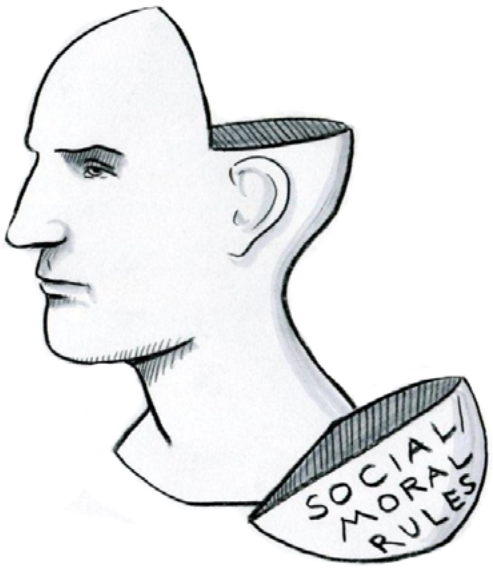

Moral Sentiments

by J.W. Stoelhorst

The fundamental insight from evolutionary theory for business and management is that we should design modern organizations to appeal to our moral sentiments.

This is a fundamental insight because it goes against an intellectual doctrine that pervades much of economics and management science. Ever since Adam Smith, economists have recognized that our self-interest is bounded by moral sentiments. Nevertheless, the dominant narrative in economics holds that human welfare is optimized in a system that maximally exploits our self-interest.

This economic narrative casts us in the role of Homo economicus, a rational agent that single-mindedly pursues its self-interest without any regard for social norms or the welfare of others. Moreover, it reduces our social interactions to arm's length exchanges mediated by an impersonal price mechanism. The resulting picture is of a system in which we are guided, 'as if by an invisible hand', towards a collectively optimal outcome despite, or rather precisely because of, the fact that we pursue our self-interest in the face of 'perfect competition'.

There is no doubt that this narrative contains an important insight, namely that financial incentives are a powerful mechanism to align interests. But on an evolutionary view of human nature, it is immediately clear that this cannot be the whole story of our welfare. The fundamental flaw of the economic narrative is that it discounts the central role of our ability to solve social dilemmas in explaining our welfare. Social dilemmas are a large class of situations in which there is a tension between

our (short term) individual self-interest and the (long-term) collective interest. These dilemmas arise in the tragedy of the commons, the provision of public goods, but also whenever we engage in team production of the goods that we exchange, as we have done throughout our evolutionary history and continue to do in modern firms.

Game theory tells us that rational self-interested individuals are unable to solve social dilemmas. Yet, empirical evidence from both the lab and the field demonstrates that we often do solve them. Evolutionary social science explains this discrepancy. It explains how the cognitive mechanisms that help us solve social dilemmas evolved – moral sentiments such as empathy, indignation and shame. These sentiments are the result of an evolutionary dynamic in which a combination of multi-level selection and gene-culture co-evolution conferred fitness advantages to members of groups in which these sentiments became more widespread.

To maximize our welfare we should design organizations for Homo sapiens rather than for Homo economicus.

The upshot of this explanation is not just a more accurate understanding of human nature, but also an alternative narrative of human welfare. In the evolutionary narrative it is not arm's-length exchange that is the primary cause of our welfare, but our ability to solve social dilemmas. Appeals to our self-interest exacerbate these dilemmas. To solve them, we should appeal to the moral sentiments that we evolved specifically for this purpose. They are what makes us human and the key to our success. The policy implication is clear: to maximize our welfare we should design organizations for Homo sapiens rather than for Homo economicus.

Are Modern Businesses a Mismatch?

by Mark van Vugt

Are we humans perfectly fitted to the modern business world? An evolutionary perspective suggests this may not be the case. An important concept in evolutionary theory is mismatch. Mismatch occurs when the environment that organisms are adapted to, via a long process of evolution by natural selection, changes so quickly and intensely that it hinders them to fulfil their reproductive goals. A mismatch example from nature is human-caused deforestation which has changed the habitats of many species so profoundly that they are no longer able to thrive or even survive in these altered environments. Yet mismatch is equally important to describe human brains and bodies. More than 99% of human evolution took place within small scale societies – egalitarian hunter-gatherer groups of 50-150 individuals that roamed the savannahs looking for food and safety. These were societies without laws, institutions, and complex technology. Behaviors were guided by habits, cultural norms, and informal leaders. Only since the agricultural revolution that took place some 10,000 years ago – the last 1% of human evolution – did our societies grow in scale and complexity. The Industrial Revolution that paved way for the modern business environment is even more recent (dating back only about 250 years ago). It produced multi-layered decision-making hierarchies, formal rules of conduct, and a sharp separation between one's private and work life – conditions unknown to our ancestors. We are currently in the digital age causing many novel mismatch problems. In the small-scale societies where humans evolved trust and cooperation were established on the basis of frequent face-to-face interactions. Yet these interactions are

increasingly lacking as remote workplace arrangements have become the norm. Small-scale societies have no formal leaders and the status and power differences between individuals were minimal. Yet modern organizations have CEO's and middle managers in place who in principle can control all aspects of your working life. The result is the risk of job alienation and power abuse. Finally, job stress and burnout result from prolonged exposure to stressors that our immune system is poorly adapted to cope with. So, what to do about business mismatch? First, we should acknowledge that our evolved small scale psychology poses constraints on the way we structure modern workplaces. Second, we should design organizations in such a way that they either work with, or if this is impossible, work around our small-scale psychology.

The current appeal of boss-less organizations may be more than just a fad; instead it probably reflects a deeper desire for the organizational structures of the past.

Thus, work environments must offer plenty of room for physical movement and informal socializing. Leaders must operate with prestige and authority rather than coercion. The current appeal of boss-less organizations may be more than just a fad; instead it probably reflects a deeper desire for the organizational structures of the past.

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Curiosity as a Commandment for Business School Curricula

by Kevin Kniffin

Understanding the evolutionary basis, though, for curiosity as a human universal imporantly invites everyone to "Stay Curious" is the two-word request that I leave on the screen when I'm done teaching my semester-long take on Organizational Behavior, a core course in any Business School curriculum.

Curiosity has gotten something of a close-up in the past year with prominent publications like Harvard Business Review pushing several stories that celebrate it. One title that gets students' attention is Warren Berger's "Why Curious People are Destined for the C-Suite" (referring to Chief-level positions such as Chief Executive Officer, Chief Financial Officer, ...).

The recent spotlight on curiosity is great but it does typically leave out questions such as "if," "why," and "how" people are (or might be) differentially curious.

For my part, I focus on the "why" and apply an evolutionary perspective to propose that we (humans) are instinctively or naturally inclined to be curious and that various environmental factors are responsible for blinkering or dampening levels of curiosity that are otherwise evolved.
I rest my argument conceptually on the hat of "neoteny" – the retention of juvenile characteristics into adulthood – and show the students this image from Ontogeny and Phylogeny. I show them the image after walking through a brief lesson on human evolution that highlights (a) the existence of a common ancestral species for humans and chimpanzees and (b) the massive amount of time that has elapsed since that point.

While I generally aim for my class to move fast with a good measure of urgency, the image of a juvenile and adult chimpanzee is likely the one slide each semester when I take the highest number of breaths while asking the students to consider what they see.

Earlier in the course, there are frequent references to evolutionary thinking – in fact, several articles on the syllabus apply evolutionary psychology to workplace dynamics [1-6] – but it's not until the capstone section that I show the conventional species-lineage chart and make the evolutionary case for staying curious.

Outside of business schools, evolutionists including Peter Gray have made strong cases that celebrate, comparably, the evolutionary bases for why play is universal – and instinctual – across humans. Curiosity isn't the only driver of play, but it's worthwhile to recognize that being curious is playful.

Business School students understandably and sensibly tend to keep a close and persistent focus on their career development. For example, it's clear that daily decisions on whether to attend events often need to meet the measure of whether it is likely to boost chances for any kind of internship or full-time job of interest.

Consequently, when "HBR" advises them that curiosity will help them become "destined" for the C-Suite, it gets attention.

For my part, I focus on the "why" and apply an evolutionary perspective to propose that we (humans) are instinctively or naturally inclined to be curious -- and that various environmental factors are responsible for blinkering or dampening levels of curiosity that are otherwise evolved.

Understanding the evolutionary basis, though, for curiosity as a human universal importantly invites everyone to appreciate that they can individually start being more curious, more innovative, or more entrepreneurial.

On a practical class-to-class level, instructors can incorporate this approach to knowledge by leaving textbooks on the side and working with original research articles where "limitations and future directions" are a staple component that invite students – and all of us – to think more about what we know and what we should prioritize for future investigations.

In this view of life, then, when curiosity isn't only expected from hipsters, hippies, or members of any other subculture, both classrooms – and the enterprises that are eventually informed by Business Schools – have great potential for broad advancement.

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The face of a leader: Honest signal or a mismatch?

by John Antonakis

Why do faces play such a prominent role in interactions and decision-making? In Macbeth, King Duncan reflects on how he had completely trusted the Thane of Cawdor who he then had sent to the gallows for treason; the King lamented that "There's no art to find the mind's construction in the face."

The insights of Shakespeare confirm what science knows today—it is hard to judge character from the face. Why then did evolution select us to have this capacity, insofar as evaluating faces, and here I am talking about individuals who do not have any obvious genetic defects? We know that children can predict who will win a high-stakes election race merely on the basis of facial appearance of the candidates—however, there is nothing in one's face that signals competence. CEO remuneration and their perceived competence are strongly correlated; however, perceived competence plays no causal role in firm performance. Judgments of intelligence do not correlate will with actual intelligence. Worse, individuals pay inordinate attention to the face (e.g., its trustworthiness) even when objective performance history (e.g., whether the person has been altruistic or selfish in the past) is available. Also, perceivers appear rather sure about their assessments of others based on appearances; and that there is agreement across perceivers gives them reason to believe that one is able "judge the book by its cover." Why would evolution appear to program us with the wrong scripts?

When encountering a person we do not look at their feet, torso, or shoulders; we are compelled to first look at them in the face and instantly judge them.

Although we would expect that evolution selected certain features indicating some underlying trait or quality that can be reliable detected by perceivers, it appears that our face-processing template-which is invoked from birth—was developed for other reasons. Perhaps it was useful for sexual selection in our ancestral times, where symmetry or attractiveness was important for signalling fitness. Or perhaps as we started transitioning to large-scale societies it was important to quickly gauge the intentions

of strangers from their features or emotions. Whatever the case, it seems that our genes have not played catch-up with the current cultural and technological milieu.

This mismatch is rather dysfunctional, whether it concerns voters, personnel selectors, or board of directors. Yet, it is because of science that we know what governs processing of configuration of facial features, the rules used to infer perceived qualities, and perceiver reactions to various features; we know too that there are dedicated brain regions that appear to process face signals. Thus, we know that we must supplement and overrule our first impressions if we are to evaluate others accurately.

In the past, evaluators used insights from the now discredited insights of physiognomy; yet, today, selectors still unreflectively rely on looks do not understand how their judgments can be biased because of the facial appearance of a target. More attention must be paid to insights gleaned from the evolutionary and psychological sciences to ensure we take decisions rationally and in an informed manner. Not only is it ethical to do so; it will also more economical because the most apt—and not the most apt looking—will be chosen.

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Building trust in diverse groups

by Paulo Finuras

In my view, the greatest insight an evolutionary perspective offers to business professionals is the ability to connect leadership, trust and diversity management together.

We know that the evolutionary origin of trust between people relays in similarity because this creates attraction, and this attraction creates emotional comfort.

We also know that, with the acceleration of globalization, it is necessary to lead and manage a diversity of people, generations, values, ways of thinking and working, among other things, and that diversity is a source of wealth, innovation and creativity, as it allows different perspectives and responses to complex problems.

We also know that the mental models that support our choice of leaders suffer from biases inherited from our evolutionary past, which are frequently mismatched with our current environments that change faster than our brains. Lastly, we know that trust within a group or an organization is a critical economic and social asset, and when nurtured, lowers the need for control and internal transaction costs, thus increasing the responsiveness, agility and competitiveness.

Therefore, in my view, the greatest insight an evolutionary perspective can offer to business professionals is the ability to connect leadership, trust and diversity management with teaching students and business professionals about our long evolutionary path and the biological economics of nature.

The main issues are:

• How can we, today, respond properly in an environment that changes faster than our brains in the field of management and business, without being betrayed by our adaptive past and usual bias responses?

• How can we face the new organizational and business pressures that require new leadership skills and profiles– and what skills and profiles are those?

Mental models that support our choice of leaders suffer from biases inherited from our evolutionary past, which are frequently mismatched with our current environments that change faster than our brains.

• How can we defeat the leadership myth that leaders are always necessary, and leadership action must be centered on the figure of one person only, when today we need dispersed leadership skills among different talents and capacities within a group?

• What can our evolutionary past teach us about creating trust and similarity among diverse groups?

• How can leaders manage to build similarity within diverse teams and organizations?

I strongly believe that any system that knows itself and the environment in which it operates has more possibilities to survive, adapt and be effective, since it better controls its destiny.

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The Evolved Decision Maker

by Max Beilby

When it comes to realm of decision making, the classical view is that we humans are eminently rational[1]. According to neoclassical economists, we are utility maximizing agents, with stable preferences that are not influenced by context[2].

To say that economic theory has impacted management practice is quite the understatement. Frederick Taylor's scientific management was largely a manifestation of neoclassical economic theory, which helped spur the industrial revolution of the 20th century. To this day, Taylorism and its emphasis on rationality and efficiency pervade the business world.

Needless to say, homo-economicus is a mythical creature. Cognitive scientists such as Daniel Kahneman and Amos Tversky demonstrated empirically that people frequently violate the axioms of rational choice theory[2]. For example, people are on average twice as sensitive to losses than they are to equivalent gains—a tendency known as 'loss aversion'[3]. Other psychological quirks weren't given such neutral terms, and are instead commonly referred to as 'biases'. Following from this cognitive revolution, the field of behavioural economics was born.

Soul searching in the wake of the 2007 Financial Crisis led businesses and governments to take behavioural economics as a discipline seriously[4]. Undoubtedly, behavioural economists have helped improve our understanding of human decision-making. However, by assuming people are essentially irrational and subsequently producing an endless list of cognitive biases, behavioural economists have arguably missed the forest for the trees[5].

What behavioural economists neglected to answer is the ultimate question: why do people possess these psychological dispositions? Answering ultimate questions leads one to evolution, as the human brain has been honed by the forces of natural selection.

What behavioural economists neglected to answer is the ultimate question: why do people possess these psychological dispositions? Answering ultimate questions leads one to evolution, as the human brain has been honed by the forces of natural selection.

Evolution makes one appreciate the adaptive nature of our psychological make-up[6]. An oversimplification of evolutionary psychology is that these 'adaptive biases' helped us solve recurrent problems in our distant ancestral past, which are now frequently misaligned with the demands of the modern world.

In a prehistoric world dominated by scarcity, avoiding losses may have been evolutionary advantageous. Living as a hunter-gatherer, it would have been sensible to place greater value on preventing losses rather than on obtaining gains, as a reduction of resources may well have resulted in death. In support of the evolutionary explanation, other primate species such as Capuchin monkeys also demonstrate an aversion to losses[7].

What is so powerful about evolution is its theoretical parsimony. Evolutionary psychology helps reconcile a bewildering array of psychological theories, and provides greater predictive power than conventional psychology[8]. For example, evolutionary theorising led to the discovery that loss aversion is domain specific, being amplified or suppressed in different environments. Yexin Jessica Li and her colleagues demonstrated experimentally that activating 'mating motives' in men erases their aversion to losses. When considering romantic interest, men on average became more sensitive to gains (whereas women on average did not)[9].

Consider rogue trading as a case in point. Seen through the conventional lens, rogue trading is merely irrational behaviour. From an evolutionary perspective however, doubling down on losses makes sense. Even at bad odds, risk taking can pay handsomely for males due to sexual selection– as a few survivors will go on be more reproductively successful [10]. It probably isn't a coincidence that virtually all rogue traders are young men.

Loss aversion (or lack thereof) helps explain various aspects of organisational behaviour. However, the 'adaptive toolbox' of evolutionary psychology offers a vast array of such instruments[11]. Evolutionary psychology not only provides us richer models of human decision-making. A deeper understanding of human nature can help us create more effective organizations, and help us address real-world problems[12].

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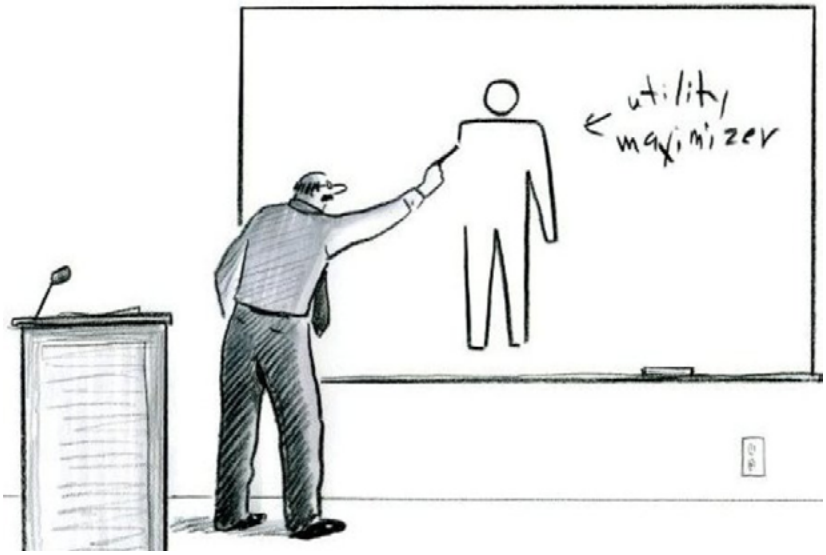

Design organizations compatible with human nature

by Stephen Colarelli

Humans evolved over the past 1.2 million years, and for 99.9 percent of this time we lived as hunter-gatherers in small bands composed of kith and kin. During this period (the Pleistocene) we developed a suite of evolved psychological and physical mechanisms that were adaptive in this context[1]. For example, people who were predisposed to cooperate with group members, mate with members of the opposite sex who evidenced signs of fertility, and were attentive and caring towards offspring—these people were most likely to survive and reproduce. Although our psychology and physiology remains primarily adapted to life as hunter-gatherers – we still possess most of that same suite of psychological mechanisms – the environment we live in now is dramatically different. Yet from the advent of the industrial revolution to the present, the business class paid scant attention to human nature. The social and physical design of organizations focused on efficiency and cost-savings. This resulted in a mismatch between our work environments and human nature[2].

Therefore, one of the greatest insights an evolutionary perspective offers to business is this: design the physical and social characteristics of organizations so that they are compatible with our evolved human nature. Understanding this insight will help to create organizations that people enjoy working at, where they work

hard to make them succeed, and where people are motivated to do their best. There are many ways to do this. Here are three examples.

Keep business units small.

Humans evolved in social units no larger than 150 people—and for good reason. We can only remember the names, faces, and our interaction history of about 150 people. Research by Robin Dunbar has found that this is a robust limit. Modern hunter-gather groups consist of about 150 people, the average total number of Christmas cards a household sends out is around 150, and military companies (from the Romans to the present) consist of about 150 soldiers[3]. Effective communication, coordination, trust and cohesion breaks down once the social unit exceeds 150, what has become known as Dunbar's number. If a business unit exceeds 150 people, firms should cleave the old unit and start a new one.

Increase face-to-face interaction.

We are a social species that evolved in an environment where communication was face-to-face. As a result, we developed a suite of finely tuned verbal and non-verbal communication mechanisms. We can get a good read on another person's emotional state, intentions, trustworthiness, and personality within a few minutes of interaction. We did not evolve in front of computer screens. Therefore, we are better able to solve problems, exchange nuanced information, and develop trust through face-to-face interaction. Better business results are likely when there is high-quality interaction among employees and between employees and customers.

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Encourage cooperation.

In The Social Conquest of Earth, E. O. Wilson's argues that humans have become the dominant species on the earth primarily because of our ability to cooperate. We are both a social species and a species where members can cooperate and help people who are not kin. This, combined with our cognitive and language capabilities, has enabled us to create large organizations and societies that have spanned the globe[4]. Too often, though, business structures encourage internal conflict (e.g., between management and labor) and hyper-competitiveness (among people and firms), which go far beyond the sweet spot of a reasonable mix of cooperation and competition. Some good

places to start include linking rewards to cooperative behavior and reducing the absurd array of corporate status symbols and pay distinctions.

Designing organizations so that they are compatible with human nature is important because of the fundamental insight that an evolutionary perspective can offer business: adapt to changes in the environment or die. Because the environment is continually changing, successful adaptation means continuous adaptation. But you already know this and know that this is extremely difficult. What you may not know is that most organizations (and most species) do not adapt and eventually go extinct[5]. Therefore, when the physical and social design of organizations is well-matched to our evolved human nature, you improve the organization's capabilities for adapting and lower its chances of premature extinction.

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The Gendered Organisation

by Nigel Nicholson

Men and women differ physically and mentally. Whether these differences matter or even are visible depends entirely upon circumstances. For example, some sports require gender segregation at the high levels (football; swimming); others do not (bridge, horse riding) according to whether the faculties aroused by the sport confer a gendered competitive advantage (almost always men over women). Yet, many situations, including many work roles, are gender neutral, and even when they do suit the capabilities of one sex over the other, you can see many crossovers: women doing "men's" work (e.g. on building sites in India), and men doing women's work (e.g. nursing in hospitals). This is because a) men and women differ in degree rather than categorically in their attributes, and b) because we are highly adaptable, and structural and cultural norms and incentives control behavior. Thus one might expect, free from such pressures, men and women might exhibit different preferences. When free to organize how they wish, sex-typed preferences may reveal themselves in what evolutionists call "niche construction": agentically created social arrangement that are conducive to their capabilities and preferences.

This can be seen in the pre-teen school yard, where boys and girls typically self-segregate to a high degree and play types of games that reflect evolved sex-typed stable strategies. Boys are often preoccupied with action games where they can test, compare and enhance their competitive advantage in physical and imaginative games. Girls are often more absorbed with complex routines that shape and reshape cooperative alliances, and group inclusion and exclusion. Conversely, it is also known that social structures shape relationships. Studies with monkey colonies find that central resource provisioning promotes competitive inter-member relations, while dispersed supply fosters a more cooperative order. An experiment with student subjects successfully replicated this relationship.

The classic pyramidal hierarchy, so beloved by men, is increasingly unfit for purpose.

Taking approximations of these two models for organizing – a) the flat, decentralized, team-based model (the operating model of hunter-gatherer groups), vs. b) the linear, status and authority based system (the agrarian/industrial dominance hierarchy), a Darwinian view of sex differences leads us to expect gender differences in preferences for these forms. This

has been strongly confirmed by my own research. Women strongly prefer type a) and men type b) as destinations for starting a career, leading, and preferences for a same sex leader in each. Organizational designs are thus highly gendered. In lay terms, linear hierarchies allow men to play the games they like best – league table status-aspiring tournaments; while flat structures, strongly preferred by women, give more scope for the logic of inclusion and exclusion; replicating what is visible in many a junior school gender playground: a voluntary segregation where the boys mostly engage in win-lose games while the girls form elaborate membership circles.

But in the digital age the world of work is changing, and the classic pyramidal hierarchy, so beloved by men, is increasingly unfit for purpose. Many newer companies much more resemble hunter-gatherer social structures in their fluid and pragmatic functionality. But what if men won't let go of male dominance hierarchy because they like it, especially its senior caretakers, people who have most benefitted from its payoffs? This has far-reaching implications, not least for the so-called glass ceiling, which persists largely because many women feel alienated by the model. They don't want to play the tournament game in dominance hierarchies because they don't like it and don't play it with such practiced ease as the men who outnumber them.

The Business World Needs Multilevel Selection (MLS) Theory

by David Sloan Wilson

What are the roles of competition and cooperation for a successful business or economy? Current opinions in the business world are a mass of contradictions. According to the metaphor of the invisible hand, the pursuit of self-interest robustly benefits the common good. Competition among firms is supposed to result in "creative destruction", allowing the best to triumph over the worst. Yet, a business retreat is very likely to feature trust-building exercises and reminders that there is no "I" in TEAM.

Multilevel Selection (MLS) Theory can create order out of this chaos. It was developed for the study of social behaviors in non-human species but it is equally relevant to the cultural design of human groups, including but not restricted to business corporations. It is based on the following principles, which are so elementary that they are unlikely to be wrong.

1) Evolution is based on relative fitness. It doesn't matter how well one survives and reproduces in absolute terms; only in comparison to others in the vicinity. As the economist Robert Frank puts it in his book The Darwin Economy: Liberty, Competition, and the Common Good, life is graded on a curve.

2) The social behaviors that maximize relative fitness within a group tend to undermine the welfare of the group. This is the opposite of the metaphor of the invisible hand.

3) Social behaviors that are "for the good of

the group" might be selectively disadvantageous within the group, but they can be highly advantageous in between-group competition.

As a quick way to understand the logic of MLS theory, imagine playing the game of Monopoly, where the goal is to own all the real estate and drive every other player into bankruptcy. This is the maximization of relative fitness within the group. Now imagine a Monopoly tournament with multiple teams. The trophy goes to the team that collectively develops its properties the fastest. This is the maximization of group fitness in a multi-group population. Nearly every decision that you make as a team player in a tournament would be different than as an individual trying to beat your opponents in the regular game of Monopoly. MLS theory makes it crystal clear that unless competition is appropriately structured and refereed, it can do a lot more harm than good. To make matters more complex, the logic of MLS theory applies to all levels of a multi-tier hierarchy, including the tiers of a single hierarchically organized corporation. What's good for a single employee can be bad for her unit. What's good for her unit can be bad for other units, and so on, all the way up to what's good for the corporation being bad for the global economy and environment.

MLS theory makes it crystal clear that unless competition is appropriately structured and refereed, it can do a lot more harm than good.

The idea that competition among firms results in the best replacing the worst would be called "naïve group selection" by an evolutionary biologist—as if selection operates only at the level of firms. Evolutionary biologists went beyond naïve group selection decades ago and their progress can be a tremendous source of insight to the business world.

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The Joy of X

by Rory Sutherland

Alphabet, the holding company for Google, contains a division called X (founded as Google X) charged with devising what the company calls "moonshots". Headed by Astro Teller, grandson of Edward, X eschews the usual business of making incremental improvements to focus instead on those rare but life-changing inventions which improve something by an order of magnitude. A "moonshot" is hence defined as a 10x achievement, where it becomes possible for something to be, at a stroke, ten times faster, ten times longer, ten times bigger or performed ten times more efficiently. In the case of the driverless car, the aim is to reduce by 90% or more the number of human fatalities on the world's roads, thus making them ten times safer.

As a marketer, I obviously value any opportunity better to understand ourselves and our true, evolved social nature. It is potentially a huge source of competitive advantage and differentiation.

And I wish them luck. They certainly have the money and the talent. And in many ways they are right to focus on what they do. Most of the real advancements made in human history so far have come about through things which are ten times better than what preceded them. Steam engines were 10xWatermills. Trains were 10xCanals. Cars were 10xHorses. The Jet Aircraft was 10xTrain. The electric light was 10xGaslight. The Internet was 10xPrint. But it won't be all that easy. In many of these areas, we are bumping up against the laws of physics and economics: it is unlikely in the medium term that 6,000mph mass air travel will be either feasible or affordable, say. In many areas of engineering we are running out of road. (Passenger air travel today is slower than in the late 1970s).

So the 10x objective improvement, on which Google as an engineering entity is fixated, will become harder and harder.

But what about 10x subjective improvement?

What would happen if we could understand people ten times better?

I believe that insights from evolutionary psychology and social psychology present us with an enormous number of possible Xs. In fact, I think progress in psychology will be a greater source of Xs in the next 50 years than progress in technology.

And finding those Xs will be inordinately easier

for us than for Dr Teller. Cheaper, too. And perhaps no-one need get killed in the attempt. There is a simple reason for this. Present day psychology leaves much more room for improvement than present-day engineering.

As with any scientific revolution, there is a very simple starting point for our psychological revolution: find out what everyone else is wrong about, then work from there. In our case, whether in policy-making or business, that simply means asking what psychological assumptions underlie a decision and asking two questions: 1) are those assumptions right or wrong and 2) what could we do differently if they are indeed wrong. Evolutionary psychology provides us with a wonderful new bullshit-detector for understanding the human feelings and emotional motivations which lie behind the cloak of reason.

And there are many, many cases where our assumptions are wrong. For instance, it is a sad fact of business and political life that no-one will ever get fired for acting as though economic theory is true. But economics, by attempting to reduce human motivation to a single dimension, is not only wrong, but immensely creatively limiting in the solutions it demands. Every solution boils down to bribing people or fining them. But if our minds are not monolithic, any attempts to appeal to a single motivation are fundamentally wrong - and, even when not wrong, imaginatively barren.

Yesterday, I found myself debating a seemingly ridiculous question. Why do people hate being made to stand on trains? Is it because it is tiring? Humiliating? Is the "made" more frustrating than the "stand" - I have often seen people choosing to stand when seats are empty? Is it mentally tiring keeping your balance? Or is it the banal explanation that your legs get tired? Or do you just feel cheated by the company which sold you a ticket on the implicit promise of a seat?

I don't know the answer. But it is certainly worth a fortune if we could find out the truth. And it would cost very little.

As a marketer, I obviously value any opportunity better to understand ourselves and our true, evolved social nature. It is potentially a huge source of competitive advantage and differentiation.

The trick is to find things which are objectively similar and subjectively different. Or vice versa.

At a very trivial level, let's take the Uber map. This does not make the wait for a taxi 10x shorter, but it does make it 10x less irritating. This comes from a very simple psychological insight that we have a peculiar evolved hatred of uncertainty (Tali Sharot's new book The Influential Mind has a wonderful chapter on this.)

But let's take this further. Can we make a hotel-stay 10x more enjoyable? Can we make travelling slowly 10x more enjoyable than travelling fast? Can we make the tax code feel 10x fairer? Can we make working feel 10x more rewarding? Can we make recycling a pleasure not a chore? Can we create 10xCooperation in a community? Could better psychology make war 10xRarer?

Here's your man Charles:

"In the distant future, I see open fields for far more important researches. Psychology will be based on a new foundation, that of the necessary acquirement of each mental power and capacity by gradation.."

This View of Life is the online magazine of the non-profit think tank The Evolution Institute, which applies evolutionary science to pressing social issues, deploying a multi-disciplinary team of experts in biology, the social sciences, and Big Data. Projects of study include the Norway Initiative on global quality of life, the Urban Initiative on sustainable community and educational development, and Sheshat, a large, multidisciplinary database of past societies, used to test theories about political and economic development.

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