

Charles Darwin, CEO: Some Applications of Evolutionary Psychology to Management

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Abstract ~ This theoretical paper outlines two potential applications of evolutionary psychology to management. Organizational change and voluntary turnover are discussed. It is argued that in certain cases people will be less resistant to change if organizational developers downplayed the perception of the actual expected outcome instead of emphasizing on the future positive consequences of the change. It is also argued that from an evolutionary perspective job security and advancement opportunities are the most important factors in ensuring people retention.

Organizational Change

It is commonly held that people are resistant to organizational change and that a change often results in a series of negative out-

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comes. A recent survey of 204 middle or senior level managers documented that only 38% of the participants reported positive outcomes after the change, and more than 50% stated that they had difficulty in motivating people as a result of the change (Anonymous, 2001). Decker et al. (2001) found that organizational change, especially when it is severe, like budget decreases or reduction efforts, creates significant morale and job satisfaction concerns.

People's resistance to organizational changes and, in general, to potentially positive changes, seems puzzling from the standpoint of a rational model. The rational model would predict that people should embark upon changes, if they are susceptible to bring them more benefits in the future. In my view, resistance to change is resistance to taking risks, or to making decisions in conditions of uncertainty. Any change comes with a degree of uncertainty about its effect on the future, especially when dealing with complex systems like business organizations.

It has been shown that people avoid taking risks even in simple situations like choosing between two alternatives which differ in the precision to which probabilities of different outcomes is stated. They avoid options that contain uncertain or ambiguous probability information even when the ambiguous probability information may maximize the expected payoff in the long run.

For example, let's consider the following illustration of the ambiguity effect: a box contains 50 black and 50 white balls and another 100 black and white balls in an unknown combination. You are required to pick a ball from one of the boxes and you get \$100 if the ball is black. In both conditions the expected outcome is \$50 because you have no reason to think that in the second condition black is less (or more) likely than white. The probability of winning is therefore 0.5 for both conditions. It has been shown that when people are asked to choose they consistently express a

strong preference for the 50/50 condition (Camerer & Weber, 1992; Curley, Yates, & Abrams, 1986). In the long run this tendency of preferring situations in which probabilities are precisely stated fails to maximize the expected payoff, therefore implying that ambiguity avoidance is an error in that it does not follow the path of utility maximization. This simple experiment alone seems to suggest that, in certain conditions, people are risk-avoidant, preferring not to choose rationally desirable decisions when the information is ambiguous.

Evolutionary psychology sheds new insights on this phenomenon and may come up with practical solutions to minimize people's resistance to taking risks in certain situations. To understand why people choose the lower risk path, we can reason in evolutionary terms. Over our evolutionary history, real life had baselines, such as illnesses or death, below which one ought not to fall. If the above problem is presented in a biological framework, people's aversion to ambiguity becomes understandable: Suppose a person needs a minimum of 200 calories per day to survive and has to choose between two resource patches that have different variances and the same expected payoff - 200 calories. Evolutionary theory predicts that such a person would choose the lower variance patch because it is more likely to satisfy the minimum requirement of 200 calories. In other words, the lower variance patch provides outcomes of fewer than 200 calories less often. Now, if the minimum requirement of survival is higher than 200 calories, say 300, and the expected payoff is 200 calories, then the theory predicts that the person would choose the higher variance patch because it will be more likely to satisfy the minimum requirement (Rode & Wang, 2000).

To show how people change their options as a function of the expected payoff, we can reformulate the above-mentioned problem by asking them to pick 10 times with replacement a ball from one of the boxes. Each black ball drawn brings a \$10 award. If we

introduce here a minimal requirement (people get at least a certain number of black balls or a minimal dollar amount) we can manipulate it so that it is either above or below the expected payoff. The expected payoff is 50% (one in two balls will be black) in both 50/50 and unknown combination condition, so that 10 draws will theoretically yield 5 black balls. If the minimal requirement is below or equals 5, then the subjects will choose the less ambiguous condition, that is, the 50/50 condition. If the minimal requirement is above 5, say, 7, then the theory predicts that the subjects will choose the unknown combination condition. This is precisely what has been found. It has been shown that participants prefer the high variability ambiguous option when the required number of black balls exceeds the expected payoff (Rode, Cosmides, Hell, & Tooby, 1999).

All these suggest that when confronted with a decision between two alternatives which differ in the degree of ambiguity of the expected outcome, a person will choose the low variability path unless the required minimum exceeds the probable expected payoff, in which case s/he will choose the riskier path which may yield payoffs equal or higher than the required minimum.

Organizational change is a complex undertaking, which cannot be reduced to a discussion in terms of ambiguities of the perceived outcomes. However, the above considerations may provide a new perspective in approaching change when dealing with difficult individual cases. When confronted with a change, which psychologically implies choosing between two alternatives (staying in the actual state, or moving to another), people are subject to cognitive dissonance and they tend to reduce it by making a decision. At least in certain situations, people weigh the variables involved in a change and make the decision in terms of expected payoff. If the expected payoff in their present condition is higher than what they consider a baseline, evolutionary psychology suggests that the dissonance will act on directing them toward the

initial secure state. Hence they will display resistance to change, even if it potentially brings more benefits in the long run. People seem not to be evolutionary prepared to risk when they already have above what they consider a satisfactory minimum. Organizational change usually presupposes reconfiguration of authority, realignment of responsibilities, and sometimes downsizing, plus the element of uncertainty always present in such situations. This means that the higher payoff route which comes with the change has a higher variance than the actual state, and the risk of outcomes falling below an already acceptable minimum is more probable, therefore it is not evolutionary desirable.

Thus far, when implementing organizational change, practitioners placed emphasis on the potential future outcomes of the change. Gunn (2001), for example, recommends that when accomplishing organizational change, one first asks people to look in a new direction, and next emphasizes the positive.

Evolutionary psychology suggests a slightly different approach: In order to overcome resistance to change, organizational developers should manipulate people's perception of their personal baseline by raising it up above the expected outcome of the current condition, rather than emphasizing from the very start on the potentially positive outcomes of the change. In such a case the dissonance will act on directing people farther from the initial state, making them more amenable to engaging in risks, which will be perceived as self initiated. Although not framed in evolutionary terms, Pierce et al.'s (2001) findings seem to offer partial support to this claim. The authors found that when change is imposed, threatens self-continuity, and diminishes what the individual had already attached to, people will manifest a negative orientation toward it. When, in contrast, change is self-initiated, does not threaten self-continuity, and contributes to the individual need for control and efficacy, people will manifest a positive orientation toward it.

Voluntary Turnover

The average employee turnover rate for US businesses in 1999 was 14.4%, the highest levels in almost two decades. Employee turnover is estimated to cost about \$11 billion a year, emerging as one of the most significant factors that impact the bottom line. The "find them, lose them, replace them" syndrome is particularly important for businesses because the most talented and experienced people are those who are disproportionately most likely to leave (Abbasi & Hollman, 2000). Voluntary turnover has decreased lately because of a shrinking economy and fewer available alternatives, however it remains an important organizational issue. Employee turnover costs are hard to estimate because usually turnover hits in more than one budget, and also because the indirect expenses such as training time for the newcomers, or imitative responses to peer turnover, are difficult to quantify. It is estimated that the direct and indirect costs of replacing a senior IT who leaves within six months from joining a company can reach as much as \$100,000 (Brown, 2000). A middle-level manager replacement can reach 1.5 times the person's annual salary and benefits (Gooley, 2001). Job satisfaction is no longer seen as merely a relation between job and pay, but rather as a complex relation between various motivational factors and different types of rewards.

Employee turnover has significant impact on organizational performance. Marshall (2001) showed a strong correlation between employee retention and quality of service rated by the customer, and other studies showed negative correlations between organizational effectiveness and employee turnover. A study at Sears, for example, showed that as voluntary turnover decreased, financial performance increased (Ulrich et al., 1991).

Although the financial component is an important factor in favor-

ing retention and it is recognized as such by practitioners, in the academic literature it is often downplayed in favor of psychosocial-motivational factors. Amongst these: security and pride in employees' work (Cole, 2000); strong peer relationships ensured by hiring people with high emotional intelligence (Brown 2001); and uniqueness and relevance of the reward to the recipient. Literature seems to suggest that customized rewards are much more effective in generating commitment than a simple cash bonus (Hutson, 2000).

There is not much consensus in the literature regarding the factors contributing to high turnover. Turnover is thought to be generated by a series of factors like: Feeling uncomfortable with or not understanding the corporate culture; feeling unrecognized and undervalued; feeling a lack of support for getting the jobs done; feeling limited opportunities for professional and personal development (Gooley, 2001). Or, weak relationships with the employer, feeling unimportant in the organization, scarce praise, poor consideration of employee feedback, bad mood within the work environment, conflictual teams (Michaud, 2000). Others emphasize bad hiring practices, toxic work environment, under-compensation, and poor managerial styles (Abbasi & Hollman, 2000). Yet others stress weak or nonexistent 360° feedback (Franklin, 2000). Roberts (2001) maintains that money comes on the fourth or fifth place as responsible for turnover, after bad relationships with managers, limited possibilities of advancement, growth and learning opportunities, and limited control over projects and work life. The relationship between money and retention is not straightforward, but mediated by the type of pay plans the actors are subjected to. For example, skill-based reward systems seem to facilitate retention in that these systems put accent on developing firm-specific knowledge, which would be of little value in other firms (Lawler, 1990). In contrast, group incentive plans yield greater turnover amongst the most qualified members of the group, especially in large organizations, because they per-

ceive themselves as bearing a disproportionate amount of the cost of free riding and opportunism (Guthrie, 2000).

The major body of findings concerning turnover derives from the attachment literature. Generally, the results show significant correlations between various factors and turnover, but these results are modest. Attitudinal variables seem to control for less than five percent of the variance in turnover (Hom & Griffeth, 1995), and the findings are even weaker for the effect of perceived opportunities on leaving (Steel & Griffeth, 1989). The lack of consensus in the literature regarding the factors responsible for employee turnover made some authors develop models that take into account constellations of factors working in conjunction. One of the latest developments is the 'job embeddedness' construct (Mitchell et al., in press), which takes into consideration both on-the-job (e.g. work attitudes) and off-the-job (e.g. commuting time) factors as influencing turnover. Under this approach, which is based on Lewin's (1951) field theory, job embeddedness is like a 'net' or a 'web' in which one can become 'stuck' (Mitchell, in press). Job embeddedness can be realized in many ways, yet it is the overall level of embeddedness which is important, rather than specific elements of it. The stronger, richer, and closer this net, the less likely the person is to leave.

Evolutionary psychology maintains that although there are many factors contributing to turnover, they have different weights on the actor's decision, and it makes security and advancement opportunities two central factors to achieving high retention. Evolutionary psychology contends that a safe and secure environment, in which involuntary loss of status is unlikely and status gain is very likely, will significantly increase retention. Because humans evolved in the context of small groups (e.g. Alexander, 1987; Tooby & DeVore, 1987), a loss of status would have been catastrophic in the currencies of survival and reproduction. We carry mechanisms sensitive to status loss and status

gain in our modern society. Elevations in rank have been shown to be linked to elevations in mood and helpful behavior. Those who experience a rise in status are more likely to behave in a friendly manner (Eisenberg, 1986). Status loss exemplified by losing a job, for example, can have serious consequences such as clinical depression, and people bounce back when they find another comparable job. Status uncertainty generates envy, which can be very detrimental in an organization, such as in situations when a supervisor undermines the accomplishments of his people to prevent them from outshining him (Gilbert, 1990).

In evolutionary terms, the 'employment-at-will' concept so widely used in the United States to justify layoffs contravenes our deeply rooted need of security and impacts negatively on voluntary turnover. People, especially men, seek and place high value on circumstances that confer on them security and status gain opportunities because in ancestral times these correlated with reproductive success. As we will argue in more detail in the next pages, women have always preferred secure men, or men with the potential of gaining status, because these were more likely to provide resources in the long run. As a consequence, men evolved strong tendencies to achieve security and those who did not were selected against. These mechanisms operate today as strongly as in the past. Buss (1995) showed a correlation between men's losing their job, or becoming terminally ill - which in evolutionary terms means losing status and promising financial prospects - and women's intending divorce. Our brains did not forget what worked before.

In the modern society security and status is achieved through job, marriage, and at the high end, through money. In contrast with the common perception, it has been shown that being married - which usually implies higher personal security -- significantly correlated with increased job satisfaction for women in both executive and managerial positions, implying that family respon-

sibilities do not interfere with the satisfaction one can derive from a job (Chambers, 1999).

Organizations that provide secure work environments seem more likely to generate commitment, low turnover, and performance above average. In 1997 and 1998, the publicly traded US companies that had a no-layoff policy - 18 companies out of the '100 best to work for in America' -- vastly outperformed the market (Colvin, 1998). German companies usually have strong anti-layoff policies. Consistently, German units operating in Europe, especially in Germany, have lower people turnover than their American counterparts. Siemens, for example, has about two times lower people turnover in the units operating on German territory than in its US subsidiaries. This difference can be attributed to many factors, and it is surely the result of a constellation of them. For example, unlike the US, in Germany if people leave within ten years from the date of employment, they typically forfeit all of their retirement savings, which cannot be transferred to other companies. Cultural differences, economic realities, and the job market itself also play important roles. An evolutionary insight to this difference may be the fact that in Germany the perception of job security is much higher than in the US. Anti-layoff policies, combined with the standard six-month notice, are likely to increase the perception of job security and consequently make people less likely to seek more secure environments. In other parts of the world, such as in Japan, where turnover is significantly lower than in the US, job security was given until recently by default through policies of guaranteed lifetime employment.

Modern organizations struggle nowadays to adapt to unstable markets and unpredictable economic environments. They began to outsource people and use layoffs as one primary strategy to diminish losses. The residual benefits of low status, which consisted not long ago of secured membership through job security, are progressively eliminated in favor of a wilder approach, which

makes competition for survival - i.e. performance management systems -- key to success (Nicholson, 1997).

Although economically efficient, these transformations threaten the very basic characteristics of traditional hierarchies, which were an approximate parallel of our ancestral social environments characterized by cooperative social contract, protected status, and self-enhancement opportunities. What is left is an assembly of features such as arbitrary advantage, low trust exchange, or oppressive authority, which are realities for which we have not developed mechanisms to deal with efficiently.

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