Evolutionary Industrial and Organizational Psychology: Working with Human Nature

John Tooby (1952-2023) - Pioneer of evolutionary psychology

Introduction

Consultancy firm Gallup, in its 2022 released State of the Global Workplace report, found that workers worldwide are experiencing staggering rates of both disengagement and unhappiness

Sixty percent of employees surveyed report being emotionally detached at work and 19% report being miserable in their jobs

In the U.S. specifically, 50% of workers reported feeling stressed at their jobs on a daily basis, 41% as being worried, 22% as sad, and 18% angry

Horizon-Europe ADVANCE-project

News > 1.2 million for research into the effects of digitised work on mental health

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Introduction

Although there are numerous different causes and explanations for the growing job stress and disengagement among workers, an evolutionary-minded I/O psychologist would consider the way the modern workplace differs from work in ancestral environments as the potential source of these problems

Why I/O psychology slow to adopt evolutionary perspective

* Narrow focus on the "here and now" (e.g., remote work, DEI)

* Ideology that people and organizations are infinitely malleable with no constraints (e.g., scientific management, leadership development programs)

* Narrow focus on methodology and stats rather than on theory (e.g., psychometric assessments)

Evolutionary I/O Psychology: Key assumptions

* Humans have an innate, adaptive work psychology, shaped by (a long period of) genetic evolution

* Many aspects of modern work are mismatched with how our ancestors worked

* Cultural adaptations enable humans to overcome evolutionary mismatches at work (e.g., artificial lighting, playful work design)

Evolution of Work: From Hunter-Gatherers to the Digital Age

Humans are "born" to work (Suzman, 2020)

Throughout evolutionary history, humans have used physical, neural, and social resources to produce essential products and services that help them survive, grow and thrive

Evolutionary biology models of work emphasize the optimization of energy gains while minimizing energy expenditure (cf. COR-theory): paradox of modern work

Evolution of Work: From Hunter-Gatherers to the Digital Age

- Foraging societies (2,5mya): work is physical, cooperative, integrated within family, with little division of labor (except gender); within an immediate returns economy

- Agriculture (13kya): Early farmers worked more and harder than foragers, facing significant risks and challenges in ensuring successful harvests; planning and control required

- Industrial Revolution and Post-Industrial Ages (250ya): New technologies to replace physical labor; management and office work as responses to the increasing complexity of industrial processes.

- Information Age and Digital Revolution (30ya): Personal computers and the internet substantially alter nature of work, enabling remote work, innovative collaborative tools, and the automation of tasks through robotics.
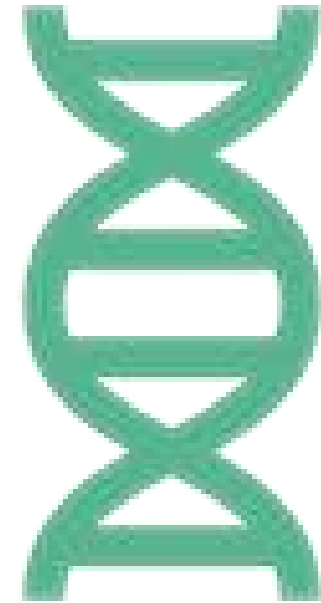
Evolutionary Mismatch in Work Organizations

Mismatch refers to situations in which the pace of environmental change is faster than the time it takes for our genetically evolved psychological mechanisms to catch up

Evolutionary mismatches have been associated with a range of modern societal issues, including lifestyle diseases like high blood pressure, diabetes, and obesity, as well as mental health problems like chronic stress, burnout, and depression

EML-scale

Evolutionary Mismatch in Work Organizations
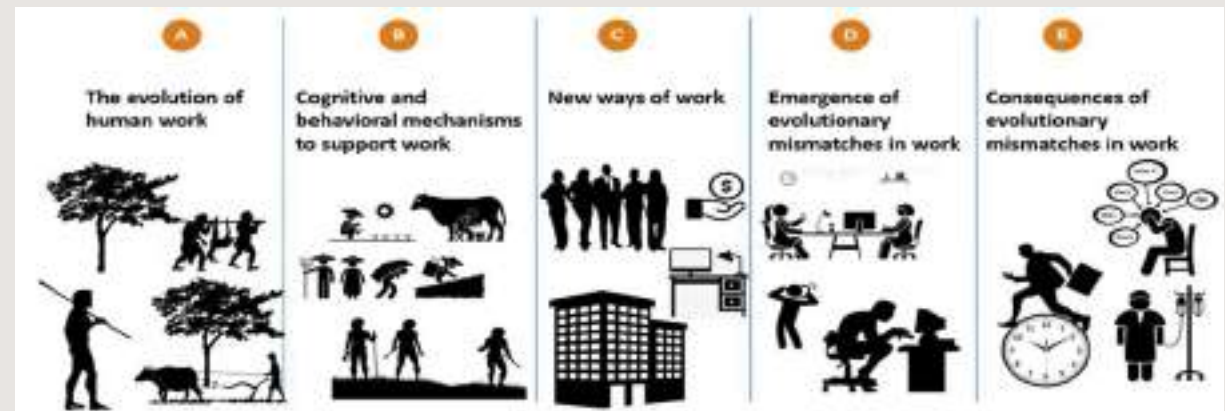
- <u>Physical mismatch:</u> (most) modern work requires little or no physical energy

- <u>Cognitive mismatch:</u> cues about what information to attend to to do one's job is often lacking (interruptions, distractions, overload)

- <u>Social mismatch:</u> cues of trust in co-workers and organization are suboptimal, limited opportunities for social exchange

- <u>Personal mismatch:</u> inputs that cue worker's privacy and autonomy are lacking in modern, digital work

- <u>Competence mismatch:</u> work skills age quickly, authority based on position in hierarchy (rather than expertise)

- <u>Status mismatch:</u> link between work inputs and outputs (e.g., promotion) not always clear (visibility), anxieties about being replaced by automation.

Digitalization associated with sitting time

The impact of digital technology development on sitting time across Europe

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ABSTRACT

Digital technology development has been proposed to explain higher levels of sedentary behaviour, but this has not yet been confirmed. Thus, here we evaluated the impact of digital development on sedentary behaviour using two metrics: digital country development and e-devices ownership from the Digital Economy and Society Index (DESI) and the Eurobarometer 88.4 cross-sectional survey with 28,031 participants ≥ 15 years old. From an environmental macro perspective, at the national level, a simple linear regression has been performed between the DESI and mean sitting time per country. To develop a micro approach to this phenomenon, binomial logistic regression models have been run among individual e-devices ownership and the daily amount of time spent sitting (≤3.5 h/day, > 4.5 h/day). Digital country development is positively related to sitting time, whereas the ownership of e-device (either DVD player, CD player, desk computer, laptop, and Internet connection) was associated with a higher sitting time (>4.5 h/day) in the overall population, with slight differences by gender. While further research is needed to understand the effect of digitalisation on sedentary behaviour throughout time, here we document how it is associated with higher sitting time, as assessed through both macro and micro approaches.

Trust is lower in virtual work teams

Humans are a cultural species
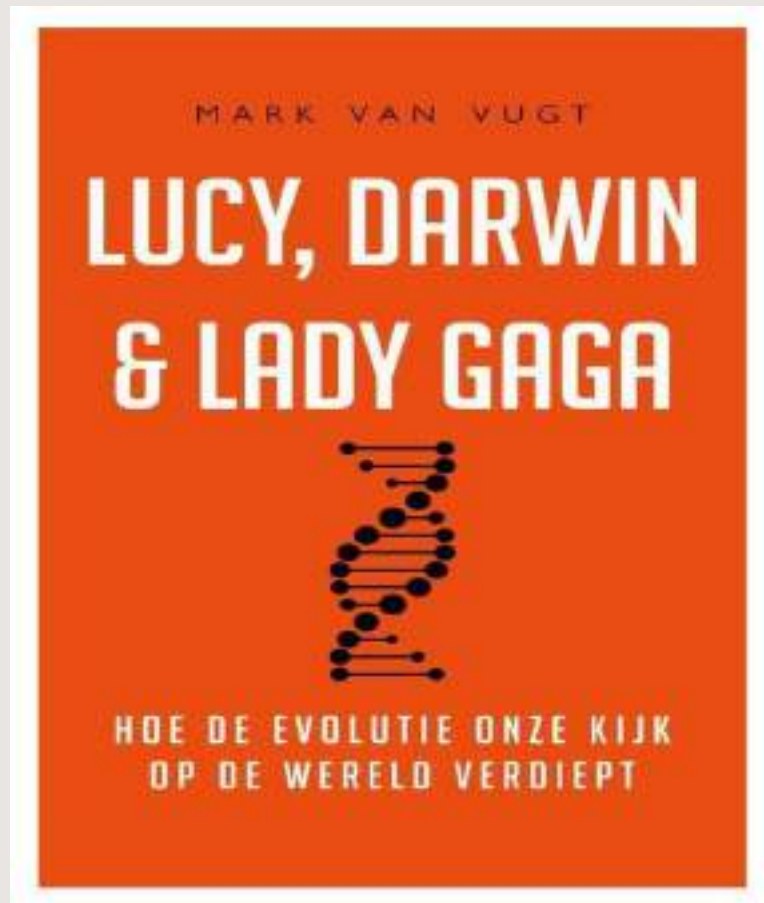
From Mismatch to Match: Culturally Evolving Organizations

Work and organizational behaviors are products of a co-evolutionary process in which genetically evolved psychological adaptations for work interact with cultural processes

Work organizations are cultural adaptations in the sense that they help to structure and coordinate a group of individuals to work together to achieve specific goal or objective

Cultural evolution can help to mitigate against evolutionary mismatches in organizations by creating and redesigning workplaces in which employees are productive and thrive

From Mismatch to Match: Culturally Evolving Organizations

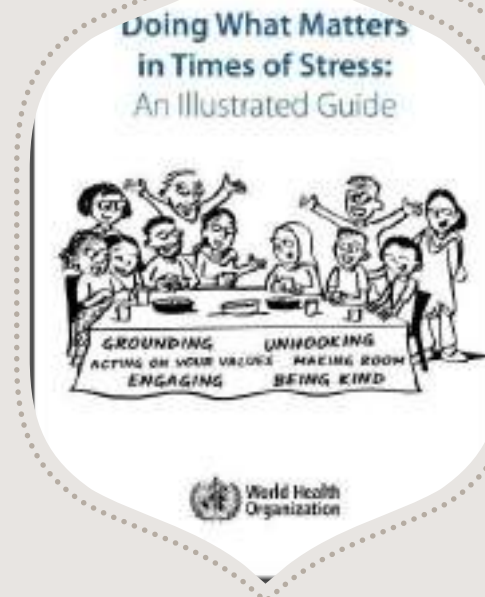Theory of cultural evolution

- Cultural learning: Humans are adaptive (and biased) cultural learners who acquire beliefs, norms and values from others around them

- Cultural transmission: transmission of cultural beliefs, practices, norms, and values from one generation to the next

- Variation and innovation: new ideas, practices and technologies can emerge and spread within a population (collective brain hypothesis)

- Selection and adaptation: selection pressures that favour some cultural traits over others, leading to the adaptation of cultural practices to specific environmental or social conditions

- Cumulative change: cultural change can occur over time as successful innovations and adaptations are retained and build upon, leading to complex cultural systems

Two examples of cultural evolution

From Mismatch to Match: Culturally Evolving Organizations

- Ergonomic workspaces: Sedentary office work can be mismatched with our evolutionary need for physical movement. Workplaces are adopting ergonomic design principles such as standing desks, adjustable chairs, and spaces that promote movement throughout the day.

- Flexible work schedules: Rigid 9-to-5 work schedule can be a mismatch with our individual circadian rhythms and varied energy levels. Flexible work schedules can help overcome this mismatch (e.g., options for flexible start and end times, compressed workweeks, remote work arrangements).

- Collaboration and teamwork: Traditional workplaces that encourage competition and individual performance can create a mismatch with our evolved social nature. Many workplaces are shifting their culture to foster collaboration, teamwork, and a sense of community. This includes encouraging open communication, promoting cross-functional collaboration, and recognizing collective achievements.

- Psychological Support and Well-being Programs: Our adaptive stress system can be mismatched with the demands of high-pressure work environments. Many organizations are now prioritizing mental health awareness and support programs to address these mismatched demands (e.g., counseling services, stress management programs)

Cooperation in Teams and Organizations

- Cultural evolution has led to the development of various organizational structures, such as formal hierarchies, job descriptions, promotion criteria, task divisions, and team-based structures that build upon our genetic propensities to cooperate and form leader-follower relations
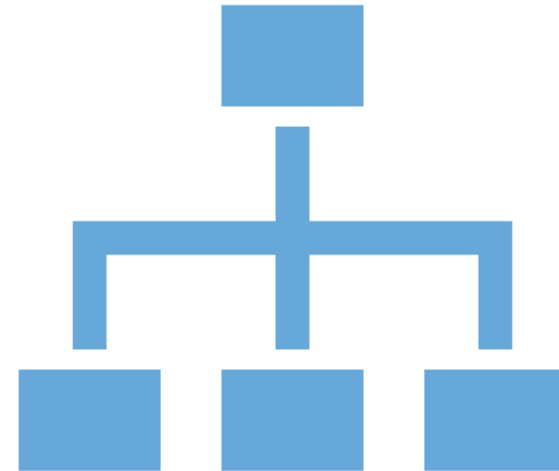
Organizational Design and Change

Human Resource Management

Workplace Diversity and Inclusion

Questions, comments, suggestions?