

A Communal AI, Will Help You *Do It All*

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ABSTRACT

In recent decades, the quality of life has severely degraded for the sake of excelling at work. People keep pushing themselves to the edge in the pursuit of success, fame, and money. Eventually, they reach the point where they cannot continue at the same pace; they get to the limits of physical and psychological abilities, which leads to burnout syndrome. The capitalist regime has left no choice but to put one's profession at the topmost priority in order to fit in society. In order to overcome that pain, the Ratio community emerged. In Ratio, every member of the community connected to Mother - an advanced AI system that is responsible for the entire population. The Ratio residents trust Mother to generate the best scenario for each person's life and the community as a whole; since she knows how to keep the optimal balance between work and personal human needs, keeping the community physically and mentally healthy.

AUTHOR KEYWORDS

Speculative Design; Design Fiction; Critical Futures;
Burnout Syndrome; AI; BCI.



INTRODUCTION

The lifestyle of modern society is known for its dynamism, intensity, and overloud. Scientific progress not just leveraged our life standards but also increased the number of alternative life possibilities. In order to reach the best, people chase after so-called success, reward, and recognition. This high demand pushes a person to his limits and leads to burnout syndrome. Burnout has been recognized as an official medical condition, just recently, treated as a type of depression. The new diagnosis is defined as follows - "a syndrome conceptualized as resulting from chronic workplace stress that has not been successfully managed [8].

Statistics from March 2020 show that burnout affects millennials the most. And due to the Covid-19 pandemic effect on life and work routine, the number of burnout cases increased. Thous 75% of working American people struggle with work-life balancing and suffer from burnout syndrome [14]. The study found that struggling with home and work balancing is more likely to cause the signs of job burnout. 83% of survey participants report that burnout negatively affects their personal life, relationships, and ability to communicate. This proves that burnout is a growing threat to society.

The core of the Ratio development is the fact that burnout syndrome is a **high cost of high achievement**. The proposed solution for burnout syndrome considers the whole community. Instead of investigating human limits and tackling the issue on the symptomatic level, we express an alternative case scenario. At the core of that solution is a decision to not make decisions. The last conscious activity made by people is purchasing a membership of the Ratio community, controlled by the Mother - AI system.

Mother is the supreme being on the planet. She is a feminine, maternal AI system created to take the burden of determining the life course of a human's life. Her responsibility is to guide a person's needs, desires while maintaining optimal physical and psychological state. Moreover, she keeps track of cultural and environmental

trends; and uses them to make intelligent decisions that will bring prosperity. All the above lead her while setting a scenario and schedule for every single member. A Brain-Computer Interface (BCI) headpiece accessory allows Mother to access a person's state and activity and share a piece of common knowledge with him; an implemented wrist display allows Mother to direct each member throughout every step in his life.

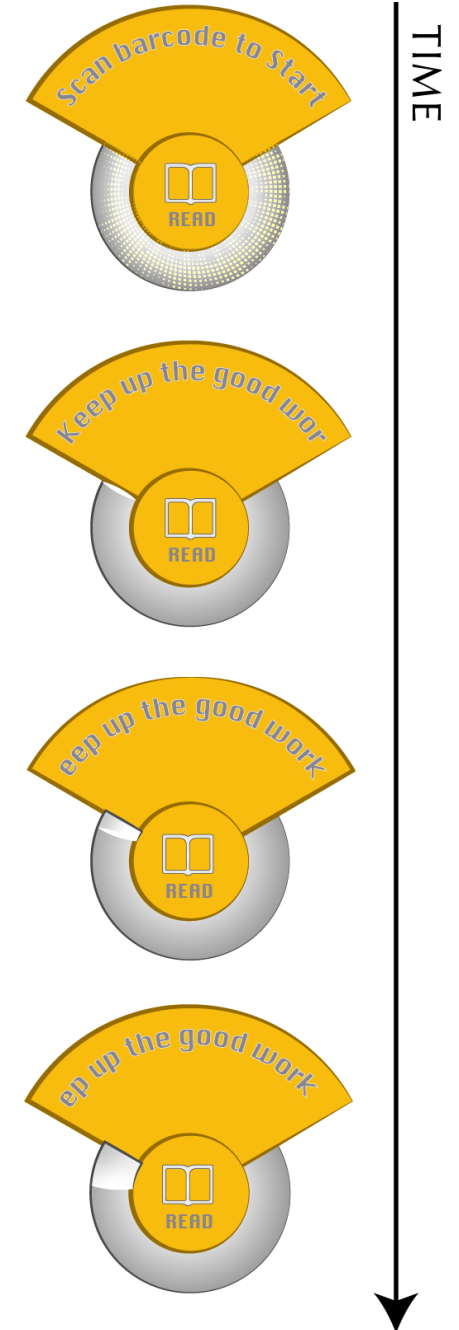
RESEARCH OBJECTIVES

Burnout is mainly related to the result of chronic stress that has not been successfully treated [16]. Until recently, the phenomenon was in the field of attention only for psychology and sociology. However, the increasing number of cases among young people attracts the attention of scientists. Nowadays, it has become one of the biggest social and occupational medicine concerns, especially in industrialized countries.

The apparent demand for a solution that could allow working people to overcome chronic stress and lack of focus has pushed the industry to search for an answer. Among the proposed products are quantified-self and well-being apps such as meditation, time management, and calorie counting. Another approach to cope with the syndrome is modifying the internal body state; available techniques are medical implants, enhancing drugs, and even invasive biohacking procedures [9].

Still, non of the emerging technologies improved human well-being sufficiently to move forward to routine usage. The new promise is the recent advancement in neuroscience that paved the way to innovative applications that cognitively augment humans' capabilities via a BCI control. Potentially, significant progress can be made in innovative applications related to decision-making, cognitive monitoring, and situation awareness beyond the existing human range [1].

Looking ahead at the human as an augmented species, we can imagine what consciousness will look like. BCI empowered by AI will take a significant part



of the responsibilities, and will carry the load of decision making. In a world scenario where human cognition is enhanced by an AI system, we set out to address the question: *Where do I end and where the AI begins?*

RELATED WORK

When referring to Critical Design, we aim to investigate the meaning and role of the alternative solution and its impact on society. We are inspired by Dunne and Raby's notion of critical design, whose goal is to provoke reflection. We used A/B Manifesto of Dunne & Raby, Critical Design FAQ [2] as guidance in this journey. It allowed our idea to become a critical medium for observing the opportunities and limitations of emerging technologies.

The political concept is a common method [3] for developing a Critical Speculative Design scenario. The purpose of defining and categorizing a political spectrum refers to the implications of a designed object in a possible futuristic world.

To reflect social and political possibilities within this implementation, we established analyzed alternative near-future global situations.

We explored relevant speculative art projects that incorporate the concept of human enhancement and life improvement. Noteworthy Uninvited Guests (IoT care devices) by Superflux [4] demonstrates domestic space that acquires new attributes through assistive IoT objects. The authors riches out defiant behaviors in the home space within the context of elderly healthcare. Many smart devices are designed to deliver constant care while limiting intention and willingness. We found this work very inspiring and fundamental for our proposal.

Another Speculative Design that explores the life improvement issue is Fit4Life [13]. It addressed the compulsive obesity epidemic and the American weight loss industry built on it. The parody of the proposed solution is nothing else but a line between humor and

realism that demonstrates how easily a design can get out of control. Its critical intervention addresses design decisions regarding the use of persuasive and ubiquitous systems. It aims to uncover meaning, value, ethics, and responsibility.

Recent development in the HCI field suggests a novel approach for human augmentation - enhancing capabilities by integrating technology into the human body. One method is to connect the human brain to a Brain-Computer Interface. Neuralink, led by Elon Musk, has shown a significant breakthrough in making a compact and flexible that is highly extensible and scalable [10]. In parallel, researches in the HCI field explores BCI applications for enhancing performance at work. One explored area is using BCIs to permit multitasking. Either by delegating tasks to humanoid robots [6], through controlling a robotic third arm [12], or by training dividing attention [5].

Another type of implant technology that is on the rise is the skin interface. Among the solutions are the Dermal Abyss display powered by biosensors [15], and DuoSkin a skin interface based on gold leaves, that demonstrates various applications such as input device, scanning NFC barcode, and output display.

On the employment side, we can see how different practices are incorporated into the work environment to prevent mental health breakdown. With regard to coping with burnout syndrome, maintaining the right balance between work and personal life is considered to be the key to preventing it. The industrial society has already made the first attempts to prevent workers' dysfunction, to avoid poor results, and financial loss. We talk about companies that initiated and implemented a flexible schedule, training classes, meditation sessions, sleeping time, and antistress activities in the workspace. Among the organizations that executed this agenda are corporates such as Google, Facebook, Sony, Amazon, and more [11].

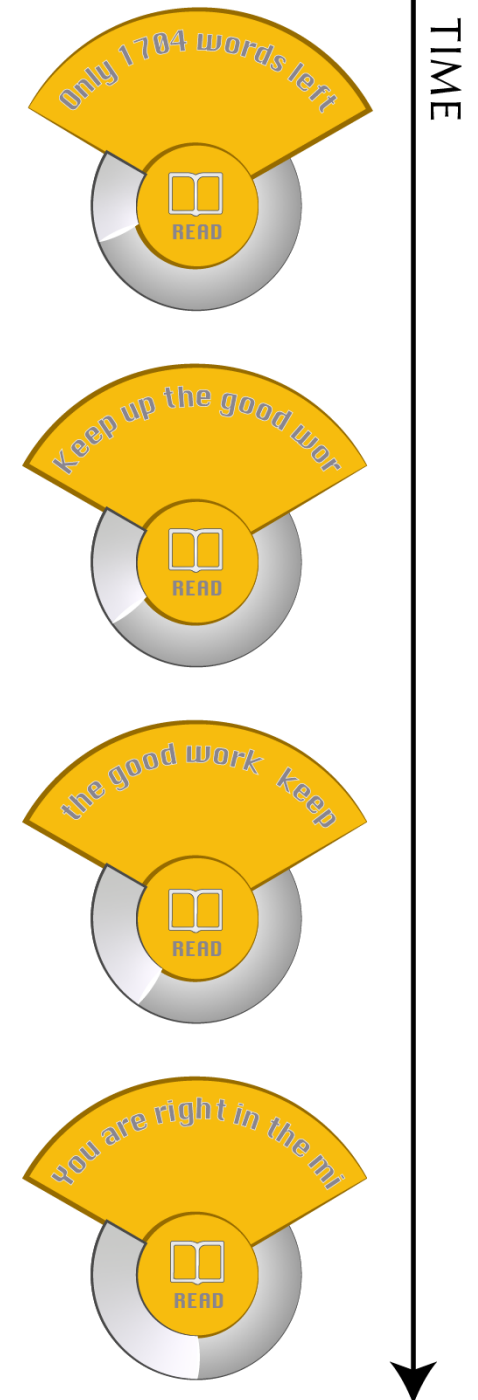




Figure 1. Collage - a resident in Ratio

SPECULATIVE RESEARCH

Exploration through Collage

Our vision depicted in this collage focuses on an exhausting and depressive work environment in the modern urban world. While chasing productivity and success, people were aiming to reach multitasking. The result is an intensive physical and cognitive breakdown, which obsessively hidden from others in order to preserve the "I can do it all" attitude.

Chelsey from the Ratio community [Figure 1] demonstrates a solution. Technology allows her to avoid burnout syndrome and still excel in her work-life. A Brain-Computer Interface (BCI) allows her to promote her cognitive and time management skills by collaborating with an AI system.



Figure 2. Collage Details BCI and smartwatch (upper), and Reflection of Capitalism (lower)

Speculative Society: Political Spectrum

The Ratio community is a Communist society, that utilizes technology to create perfect equality. Additional prominent characteristic is their belief in extropianism, which states that the advance in technology should be leveraged to enhance human capabilities.

The regime in Ratio learned from historical communist societies, that communism tends to fail due to inequalities in workload and gaps in contribution between members of the community. Hence it utilizes technology to suggest solutions to those two pain points. Making sure each member will be essential and vital.

In the Ratio community, people are powered by Mother - an advanced communal AI system. The public necessities guide Mother's judgment. Moreover, all the residents share the same knowledge and skills since the communal AI extends their intelligence. One day a person works as a nuclear engineer, tomorrow he will be an actor. All that is needed is to connect to Mother.

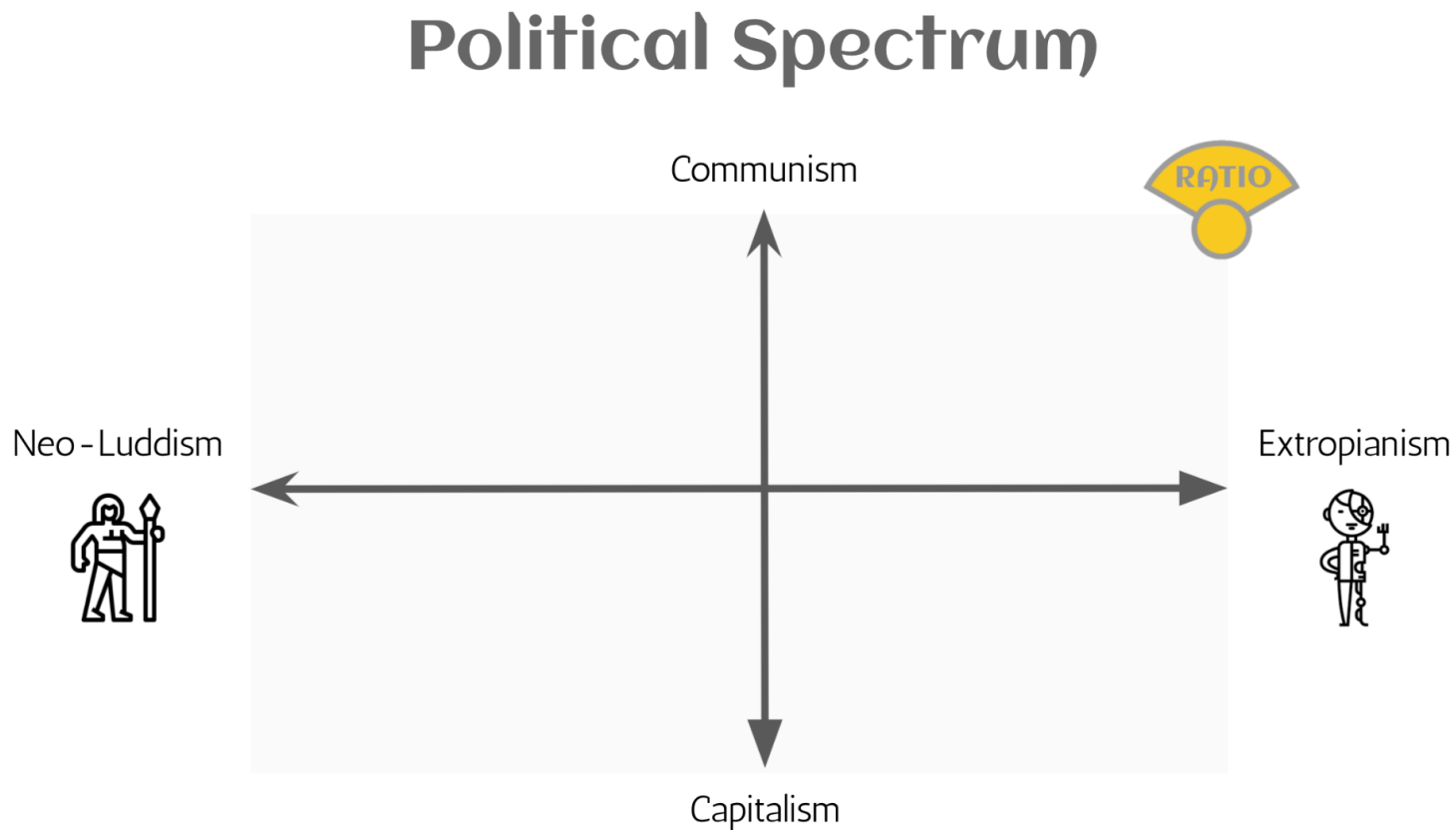


Figure 3. Ratio's Political Spectrum



Figure 4. BCI Accessory First Prototype



Figure 5. BCI Headpiece and Wrist Display

Speculative Design Proposal

The design of Ratio's human enhancement devices should embody their empowerment role. Accordingly, we determined a set of design guidelines. First, the device should become part of the citizens' existence and identity. Therefore it should be permanently integrated into their bodies. To achieve this goal, we developed a BCI device that connects to the communal AI (Mother); and a tattoo display that communicates the instructions back to the user. The following principle was to design delightful and desirable objects that will attract people to join the community. The accessories esthetics must represent luxury, glamour, wealth, and technological progress. Since the art deco movement shares the same values mentioned, we decided to use it as a visual inspiration.

Each member at the Ratio community permanently connects to the following two appliances: a BCI headpiece accessory and a tattoo-based wrist display [Figure 5]. While the first collects data to optimize the user's time management, the latter communicates the schedule back to the user to keep him healthy and productive every day.

The BCI is directly connected to Mother, allowing her to track the user's mental and physical state. Using the personal information in conjunction with government needs, Mother will schedule activity after activity. The tough decision-making is being delegated to her. Once Mother makes a call, a task appears on the wrist display. At any given time, the user is exposed only to his current assignment. The sense of time is irrelevant. All that matters is being productive without getting burnout. Hence there is no point in planning ahead of time.



Figure 6. Examples of Possible Activities

A task cycle starts with receiving a notification about a new task together with the relevant destination. The task characteristic varies [Figure 6] from resting on the beach, working as a lawyer, and up to changing your child's diaper. For all those tasks, the same flow is applied. At first, a new assignment shown on the wrist display presents the task type and then its location. Then, navigation instructions lead the user to the task's destination [Figure 8]. When the user arrives at the relevant site, a barcode appears on the wrist display [Figure 9]. Scanning the barcode will grant the user permission to enter. This mechanism assures that each member is staying exactly where he needs to be. After the barcode scanning, the user's BCI automatically downloads the required knowledge from the communal AI [Figure 10]. Now, the user can start performing the task. During the assignment, the wrist display will share positive reinforcement and indicate the activity's progress [Figure 11]; according to Mother's prediction. Mother will maintain the delicate balance of not getting burnout and still keeping maximum productivity. When the task is completed, the whole procedure repeats [Figure 7].

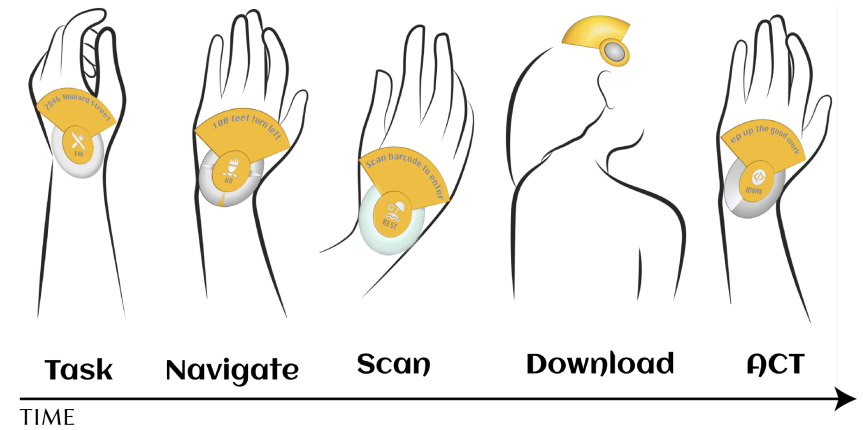


Figure 7. User Experience Workflow

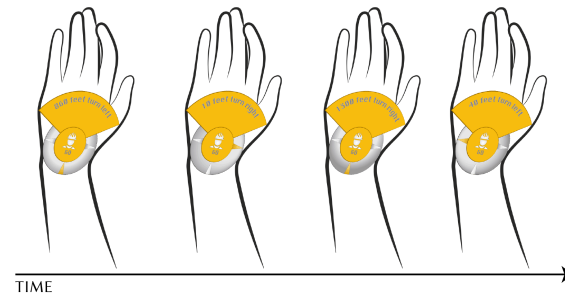


Figure 8. Navigating to the Next Task

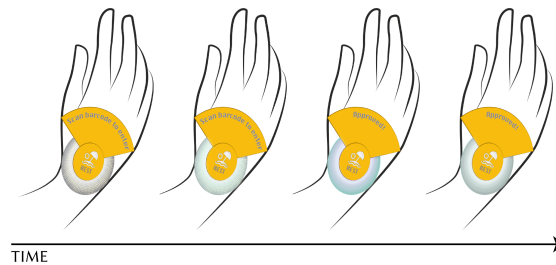


Figure 9. Scanning barcode

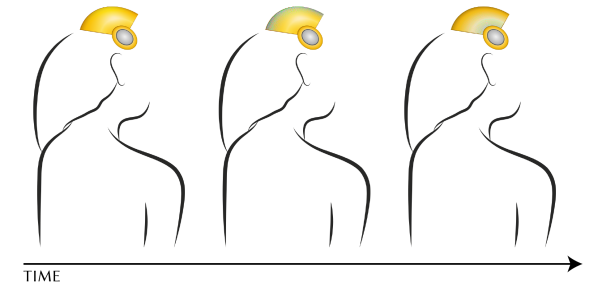


Figure 10. Downloading Knowledge to BCI

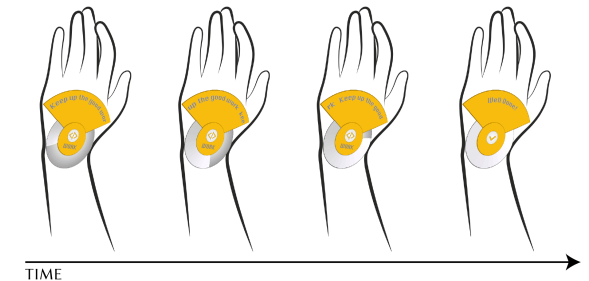


Figure 11. Tracking Progress During Task

Diegetic Prototype Video

To promote and expand the Ratio community, we created a marketing campaign that invites new members to join the community. The selected visual style is a pastel color scheme and calm videos that create a pleasant atmosphere [Figures 12-13]. The video's transcript was carefully planned to add an additional layer of meaning. The dissonance between the video's visual channel to the voiceover content intends to throw the observer from the pastoral scenario to uncertainty. Raising the question of whether the citizens are liberated from their worries or subjected to a supreme being.



Scan to View Ratio's
Promotion Video

DISCUSSION

Our fictional concept aims to catch attention to unrealistic expectations from others and ourselves. Moreover, to encourage working people to reconsider their self-judgment. We escalate the critics, fortify competition in the capitalistic condition in order to justify voluntary communism. Where the rate of competition and achievement remains an open question. The paradox of total dedication and productivity while lack of recognition and inability to make a single choice became the main precedent in Ratio reality. Will joining the community be the last choice made? If so, will you

do it? The ethical concern goes beyond the choice dilemma and relates to intellectual property and willingness to share one. Based on the archetype of the mother, the AI system is called to care about everyone equally all the time, warning of possible failure and wrong choices, giving the possibility to stay "a good child." We offer to try on life without bad decisions, suffering, exhaustion, responsibilities, and identity. Our goal is to compare machinery consciousness with those who prefer the underground life behind the Ratio, where another community appreciates the full spectrum of experiences, as well as emotions and decisions.

CONCLUSION

We brought the burnout issues to the center since it constantly worsens the dynamic of the working population. Our goal in this paper is to provoke discussion of the right strategy to overcome the disbalance between striving for success and basic needs. We highlighted three resulting critical issues for this strategy of dealing with burnout: the paradox of achievements, the inability of choices, and identity crises. Through Ratio, we aim to slip a tempting question that everyone will have to answer: *where does the real me end, and where does the machine begin?* By plunging into a carefree atmosphere, we encourage to realize ones' own personal price. Last, a question that emerged for future research relates to the family dynamic and education concept under the condition of Mother's ownership.



Figure 12. Frames from the Diegetic Prototype Video

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