Human Quest for Rapture and Ecstasy

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TO CITE

Rochat, P. (2024). Human Quest for Rapture and Ecstasy. In *Proceedings of the Paris Institute for Advanced Study* (Vol. 21). https://paris.pias.science/article/human-quest-for-rapture-and-ecstasy

PUBLICATION DATE

12/10/2024

ABSTRACT

A universal aspect of human psychology is the quest and cultivation of rapture states, the need to stand outside oneself (ecstasy). The question is what may drive the human need to abandon and transcend a default mode of survival to cultivate altered states of consciousness? The idea is to approach this basic question in light of what arguably sets us apart in nature: human self-consciousness and the fact that like no other animals we know that we are going to die. Empirical facts on the nature and developmental origins of human self-consciousness are used to shed a new light on the universal human proclivity toward trance and transcendence, with or without drugs, in practice or in recreation. Such proclivity would rest on the same ultimate drive to escape the default state of rational self-consciousness and the scandal of death: our inescapable, known, yet inconceivable reality.

Acknowledgements

This paper was written during a 1-month residence at the Paris Institute for Advanced Study under the "Paris IAS Ideas" program A warm appreciation to the IEA of Paris for its generous invitation, Hannah Kreuzinger, Emory Infant and Child Lab coordinator for her careful editing of this article and my good friend François Bertrand for his continuing encouragement and for many stimulating as well as inspiring discussions on the topic.

Foreword

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I took advantage of the generous month-long invitation for a "résidence d'écriture" at the Paris Institute of Advanced Studies (IEA) to wrap my head around a phenomenon that is both conspicuous and pervasive in humans. This phenomenon is the fact that across human cultures and societies, as far back as it may be recorded, we humans cultivate various individual and group activities that lead us to transcend the contingencies dictated by our mere survival. The starting point of this reflection is the assumption that this is a universal, major trademark of human behavior.

As a developmental psychologist, I try to offer some meanings to such phenomenon based on what we have observed in babies at my Lab and at other baby Labs, specifically the early development that leads the human child toward self-consciousness, symbolic functioning and linguistic proficiency. It is against these cardinal and unique features of the human mind that I want to consider the relentless and universal human quest and cultivation of rapture states of ecstasy. Note, per disclosure, that this article is a work in progress, laying down the foundations of what should become a book.

The question and the idea

While travelling around the world, on all five continents, it is striking to notice that everywhere you go, from the most isolated, to the most populated and highly accessible regions of the world, humans are systematically cultivating and seeking out *states of ecstasy*.

Etymologically: "ecstasy is a term that comes from the Ancient Greek ἔκστασις (ékstasis), which means "to be or stand outside oneself, a removal to elsewhere" (Wikipedia, 2024). The word ecstasy was borrowed from Old French

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"estaise", which means "ecstasy, rapture". The Greek word ekstasis means "displacement, mental distraction, astonishment, trance" (Wikipedia, 2024).

If we accept that there is, as part of human nature, a universal and perennial cultivation and search for "displacement, mental distraction, astonishment and some sort of trance state" then it is worthwhile to ask what may be the foundations of such motives? What do humans try to displace and distract themselves from? Why do all human cultures, with no exception, offer its members ritualized ways for mental distraction, various options for individuals to get displaced and reach ecstatic states of mind? These options are multiple, varied, and collective. They include spectator sports, theater and movie viewing, but also the collective rapture cultivated in festivities like carnivals and celebrations, but also group dance like techno raves, the Tarantella trance dance in Southern Italy, the twirling of Dervish Turners; the rituals of trance and possession such as those documented by Jean Rouch in his seminal documentary "Les Maitres Fous". They also include shamanic rituals from Siberia and Mongolia, notwithstanding individual engagements in various meditation techniques, the induction of hypnotic trance, and the cultivation of rapture states by listening and playing music. Finally, of course, they also pertain to the systematic and deliberate worldwide propensity to produce altered states through a wide panoply of self-administered drugs cultivated around the world for millennia. Such practices often become a central existential motive for addicted individuals.

Traces of the human quest for displacement and distraction, go far back in modern human evolution. We find ancestral traces of such quest in the remnants of mass killings that would imply apparent festive and collective rituals, which may be also linked to the game hunting scenes of cave paintings found in the Southwest of France dating back fifty thousand years ago. Traces of fermented substances found in pottery like alcohol date back about 7,000 years ago.

Figure 1: Indigenous Intoxicants Worldwide

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(from LAPHAM'S Quarterly, vol. 6, Number 1, Winter 2013" Intoxication", pp. 10-11)

Drugs, psychedelic paraphernalia and all the other cultural, ritual arrangements that exist around the world are ready-made artifacts offered to individuals to reach rapture. They are ultimate means to an irresistible and universal quest for ecstasy in the primordial Greek sense of "*to be or stand outside oneself, a removal to elsewhere*".

All these universal practices and artifacts tap into what is unquestionably an important determinant of human nature, something that is part of our psychological DNA. If we accept this broad assumption, then naturally the question is what is this psychological DNA? What motivates humans in general, to attempt so predictably and systematically at *being and standing outside themselves*? What are we trying to escape? Can we consider that there may be a general human motive behind the systematic quest to stand outside oneself?

The goal here is to create some meanings around the universal human quest and cultivation of rapture states, with a particular emphasis on the basic human need to stand outside oneself (ecstasy). What may account for such universal phenotype, the shared human need to abandon and transcend a default mode of survival, to reach another, altered state of consciousness? Can we characterize such alter state quest in general, evidenced base psychological terms?

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The idea is to make sense of these questions in light of a major psychological trademark of our species. This trademark is *human self-consciousness* and the fact that like no other animals we know that we are going to die.

Self-consciousness and self-agency

Research show that newborns do manifest an implicit sense of their own embodied self as a differentiated entities among other entities. However, it is only by 18 months after birth that they begin to manifest a sense of their own body as an objectified entity, able to identify themselves in a mirror, as in the image below of a child passing the mirror mark test. It is also around this time that children start to use personal pronouns such as "me", "mine", or "I" in their rapid language development.

Figure 2: 36 month-old child passing the mirror mark test, reaching directly to the mark surreptiously placed on his forehead that he discovered looking at himself in the mirror

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(Photo by the author)

Children starting to recognize themselves in a mirror also demonstrate emerging kinds of social emotions like shame or embarrassment. An example of it is with a 2-year-old child who notices a mark that was placed surreptitiously on her forehead prior to her mirror exposure. Subsequently, the child hid her face from herself in apparent embarrassment.

Figure 3: 24 month-old child passing the mirror mark test, showing a first reaction of embarrassment as she discovers the mark that was surreptitiously place on her forehead

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(Photo by the author).

This reaction of embarrassment is new and marks the beginning of self-consciousness proper which is also the expression of a novel *worry of* self(souci de soi): the emergence of a *care for reputation* that is presumably one of the trademarks of human nature.

Darwin in his book on the expression of emotions in "Man and animals" notes: "Blushing is the most peculiar and the most human of all expressions...." He goes on noticing: "It is not the simple act of reflecting on our own appearance, but the thinking what others think of us, which excites a blush. In absolute solitude the most sensitive person would be quite indifferent about his appearance" (Darwin, 1872, pp. 309 and 325).

Aside from the novel and presumably "uniquely" human worry of the self and reputation emerging from around 18 months of age in typical children of all cultures, there are

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important precursors or "primitives" announcing such major and predictable change in human psychological development.

As already mentioned, immediately after birth, and probably even during the last trimester of gestation, the human young express some sense of embodied self-awareness. This awareness is implicit and somehow a built-in feature of the developing organism. Newborns do manifest a discrimination of their own body as a differentiated, substantial and situated entity among other entities (Rochat, 2018).

From 2 months post-partum, they also demonstrate that they are *agents in the world*, acting and creating perceptual events that they can actively produce, like kicking a mobile to make it move or sucking in a certain way on a pacifier to produce some sounds. It is evident that from at least 2 months, infants behave as agents or actors (as controllers) of what they discover and perceive (Rochat, 2006).

This is a central point that we should interpret as a major root or pillar of human psychology, a primary force that underlies human nature which is *the sense of control over the perceived environment*.

At this juncture (2 months post-partum), infants start behaving as "control rooms" becoming their own headquarters of perception and action. As Piaget and many other pioneer developmental psychologists insist, children actively construct the reality they perceive and conceive. In other words, self-agency is at the core of child development, and by extension, of human functioning in nature.

With that in mind, let's go back to our original question of what may underly the universal human quest for ecstasy.

Human self-conscious trap

Human self-consciousness, in tandem with human exacerbated sense of reputation is our curse. As Sartre famously remarked "hell is others", as much of what we do is inseparable from what others may think of us, ultimately making others the evaluators of our own worth.

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Our own research shows that this particularly exacerbated human trait (care for reputation) starts manifesting itself already from around 18 months of age (Botto & Rochat, 2018). The care for reputation and the central role of others' evaluation is instrumental and at the core of our basic need to affiliate with others. Our survival depends on it as without others, we are nothing. We cannot survive, especially when we are young. This is particularly true considering for example that among all primate species, ours is distinct by the prolonged immaturity of our young, hence human hyper-dependence on others from the get-go.

Most importantly, and aside from human exacerbated care for reputation, human self-consciousness is unique because it leads to the inescapable realization of our own finitude: all humans know they are going to die, and death is the ultimate human conundrum.

To quote philosopher Vladimir Jankélévitch (2008): "Death is a scandal". It is indeed a necessary human realization that humans must somehow come to terms with it. It is scandalous because it is a necessary demand placed on humans that is fundamentally unresolvable. To think is to be and to think not being is a profound imposture: How can I conceive not to be as I need to be in order to conceive?

It took centuries before the invention of zero, "the nothing that is not", in the context of counting and mathematics (Kaplan, 1999). But from a purely existential perspective, death is by definition inconceivable, unless you avoid the problem via the adoption of immortality narratives which simply elude the issue by prolonging one's life beyond biological death with models of re-incarnation or other metamorphosis leading toward eternal life. Such beliefs evade the fundamental conundrum of discontinuity toward nothingness (i.e., what is logically speaking, and by virtue of being, *inconceivable*).

It is against the backdrop of the human self-conscious condition that we want to consider the human quest for rapture and ecstasy, the universal human drive "to be or stand outside oneself". We view this drive as a systematic attempt at transcending one's own trapping into being and the scandal of death, what we posit as two core elements of human self-conscious psychology.

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Human quest for reverse agency

The core idea proposed here is that a common denominator of all human attempts at trance and ecstasy seeking is the fundamental attempt at *reversing core agency.* Let me explain.

We know, as numerous, aforementioned infant studies show, that the sense of own agency and of being the control room of our own perception and action is rooted in our psychological make-up from at least two months after birth. In other words, we are built to be embodied agents in the world. The control room *is* us from birth, babies are actors within their environment, not just "couch potatoes" as suggested by some earlier developmental theorists (as for example the famous "blooming buzzing confusion" proposed by William James in 1890, over a century ago to qualify the starting state of human cognition).

Now, we can securely affirm that babies are born well equipped to experience themselves as actors and not just as passive receivers of random stimulations through the senses. From the get-go they are active learners basing their learning on base-rate statistical priors. From this, we can posit that it is a built in, constitutive property. The sense of our own agency in the world is the human default mode, as it is also probably the implicit default mode of all living things striving for survival. However, what is different with us humans, is that we evolved to develop meta-levels of self-conscious awareness regarding who we are as agents in the world and our place in the cosmos, including the logical necessity of our own finitude: the awareness of the scandalous, inconceivable fact that we are all going to die.

The central human conundrum is thus, ultimately, how to deal with such a scandalous reality, the reality of our own mortality, which, as expressed before, is an impossible conundrum. It is what can be conceptualized as the *human self-conscious curse*. It is a curse that can be posited as being experienced by all humans, whether in denial or in fear, urging them for an escape, the *escape from evil* as anthropologist Ernst Becker (1975) calls it.

The kernel idea proposed here is that what all the quests after ecstatic states of consciousness have in common would be the systematic attempt at resolving the

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mortality conundrum by reaching a state of consciousness that fundamentally reverses the deep sense of our own agency in the world, striking down the own ingrained, default mode of the *control-room approach* that we are constitutionally built for.

If the ultimate function of our brain is to predict and control what is going to come next (something all neuroscientists would agree upon), the ultimate function of all human attempts at ecstasy would be, following our intuition, to let go of such control by delegating it to art, drugs, collective effervescence, spectator sport, trance, rituals, and all the multiple cultural artifacts developed across all traditions and human populations to get rid of the inescapable dead end of our own control. That is our conceptual lens.

The proposal is that a common link to the various forms of the human quest for ecstasy, all converging toward a relief from one's own built-in sense of internal control. This common denominator would be the propensity to delegate control to external forces that relieve individuals from their own reason and control.

As described and coined by cultural anthropologist Brad Shore (2023), this is vividly illustrated in the Balinese saber trance ritual, in which warrior dancers turn their dagger toward themselves under the spell of reverse control, abandoning their own agency as warriors to external forces.

The idea proposed here is that the same process may account for trance-like states and all the various forms of human rapture quests expressed in spectator sports, risk taking activities, movies, theater, addiction, and all collective rituals, acts of creation, or induced altered states of consciousness through rituals, drugs, meditation, or hypnosis.

Potential pushbacks on the idea

Before discussing and illustrating further this idea, it is important to consider legitimate objections to the proposed conceptual grid.

- One could argue that human self-consciousness and the sense of finitude may not be the same source of existential tension and unresolvable conundrum for most

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people. Not only one may elude the sense of one's own mortality by adopting an immortality narrative, but also most people may not be troubled by the idea of death, even if they don't believe in an afterlife. Accordingly, a large number of people would not be particularly anxious to resolve "the scandalous human conundrum of mortality awareness". This said, all share the universal propensity to engage in the quest for ecstasy, whether in sacred or secular cultural practices. Thus, remains open the question of what may drive what appears to be signs of a generalized escape toward altered states of consciousness. Indeed, what are humans trying to escape from?

- One could also argue that this is not the right way to posit the problem. Rather than escapism, the universal human quest for rapture may be more simply construed as a quest for reward and pleasure, in other words, for purely hedonistic reasons. Spectator sports, art, or meditation, like drugs and collective effervescence, may be simply the source of irresistible, addictive pleasures and rewards, without any of the existential or metaphysical baggage proposed here to account for it (i.e., the human self-conscious conundrum). This, arguably would be a more straightforward, economical account, yet essentially circular and meaningless (i.e., seeking pleasure for pleasure). Such account leaves aside the deeper question of what kind of pleasures and rewards humans are questing for, and what may drive such quest above and beyond simple approach-avoidance and mere pleasure/reward seeking principles. Behaviorist or post-hoc evolutionary interpretations elude the larger question regarding what may be the existential *meaning* of human rapture quest. This is what we try here to capture, placing the question - as it should- in the context of human uniquely symbolic and self-conscious psychology.

- Another objection to the proposed approach is that humans are not the only species engaging, cultivating, and getting lost in the rapture of games and playing. Play, as evasion or suspension of reality, may have more basic biological functions that all animals may share, whether of the mammalian, avian, or aquatic order. Birds and octopuses are observed engaging in what would amount to play activities (activities that do not seem to serve any survival functions). Obviously, dogs play and act pretending aggression while switching roles as aggressors or victims, be they chihuahua against great Danes. They manage to enact yet suspend any violent

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reality. They "dramatize" and "enact" fictive events or postures, not unlike us going to movies or engaging in role playing games. Pretense and deception are indeed not specific to humans but rather pervasive in nature, starting with all the behavioral decoys to trick both predators and prays, the camouflage deceptions evolved by species from hermit crabs to birds, butterflies, and octopuses, as well as all primates. It is thus reasonable to assume that the possibility of the search for and cultivation of rapture and ecstasy through play may not be exclusive to self-conscious humans. And indeed, it is not. However, human self-consciousness and human mortality awareness bring pretense, symbolic simulation and suspension of reality to incomparable creative and symbolic levels. This is particularly evident in the realm of "plays" as in movies, performing art, music, literature, but also sports and other rapture cultivation around food, drinks, rituals, notwithstanding of course all the drug paraphernalia and other trance techniques specifically devised by humans to induce altered states of consciousness such as meditation or hypnosis. Again, we do communicate like any other living creatures but do so symbolically based on a syntax and a creative differentiation between signifier (e.g. a sound, gestures) and signified (what those stands for). We evolved language like no other species, including the explicit metacognitive ability allowing us to simulate the world and the mind of others, their beliefs and mental states, able to reflect upon them and communicate such simulations even if they are mere product of our imagination. We can figure things that do not exist into reality like unicorns or extraterrestrial aliens, even able and inclined to speculate and theorize about them. Aside from being able to speak and communicate products of their imagination, humans can engage in mental travel, projecting themselves back in time and forward into the future, reconstructing and anticipating events. As self-conscious entities, we keep reminiscing our past and anticipate our future. We are endowed with so-called *autonoetic memory*, considered as a major human psychological trademark.

- Yet another potential criticism to the proposed conceptual grid to answer the question of what might hide behind the human pervasive search for rapture and ecstasy could be that it is grounded on a perspective which eludes the deep link between individuals and the traditions of their culture. It is too individualistic. What is proposed here is indeed more a psychological than a cultural account. However,

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as mentioned earlier, the self-conscious mind we evolved as a species is particularly fitting to an exacerbated sensitivity to surrounding others. From 18 months of age, the child starts manifesting social emotions like guilt or shame, showing the first signs of a concern for reputation. This fact emphasizes that human self-conscious psychology does not develop in a social and cultural vacuum, but rather prepares children to enter and align with their social and cultural surroundings. Reasons for the developing sense of shame and guilt in the human young will reflect children's sensitivity and attunement to the social and cultural norms of the social environment they inherit by birth. In short, individual psychology is necessarily embedded in the larger social and cultural environment which provides content to the self-conscious psychology we evolved as a species. It is inseparable from individuals' socialization effort to fit the group of other self-conscious individuals they depend almost entirely on to survive for the first 10-15 years of their existence.

- Finally, the proposed conceptual grid may be criticized for the overtone of "escapism" attached to the human search and cultivation of rapture and ecstasy. One could argue that rather than the escape suggested on etymological grounds, such quest may actually be captured on the basis of a universal drive to dive deeper within us in search of rapture and novel truth, a "true" self, hidden inside ourselves, buried under the debris of our relentless self-conscious monitoring and rumination. As such, the clearing up of such debris would lead to the revelatory rapture of a new, more harmonious and less dualistic sense of being "at one" with the world that surrounds the individual. However, we may argue that such a dive entails the attempt at leaving a particular mental state for another. A common trait to all meditation techniques is indeed to abandon self-conscious thoughts and other rational ideation in the stream of our consciousness. Meditation practices all concur in advising practitioners not to pursue fleeting thoughts. Instead of falling prey to thoughts' rumination, one is advised to let them go, let them pass by, carried along the relentless stream of our consciousness. Thus, it appears that rather than a vertical dive into something to discover something else, the point is to distance and try to abandon the natural inclination to enter rational rebuttals within us. As for all other human rapture quests, in all meditation techniques there is a quest toward abandoning something for something else. This would be congruent with our

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conceptual grid. Meditation would be another attempt at self-abandonment associated with the quest for rapture and ecstasy. Arguably, meditation would be yet another exercise that is primarily devised to help us, like art, sport, rituals, and any other trance-conducive techniques, to transcend the entrapment of self-conscious thoughts.

Human symbolic mind

Work with infants has revolutionized our views on the origins of human cognition. An area of infant studies that has been particularly fruitful focuses on what prepares infants to acquire language: the ability to communicate symbolically with the use of an infinitely generative syntax or grammar by which we communicate meanings and make explicit sense of events and things in the world.

What pioneer research of the past 50 years shows is that infants are born to detect "categorical" speech sound contrasts (phonemes), from which they rapidly develop in the first year of their life a specific sensitivity to the phonemes that are constitutive of the language of their own culture. For example, prior to 9 months, a Japanese infant will discriminate the difference between the phonemes "ra" and "la", losing such ability by the end of the first year, like all Japanese adults. In other words, infants carve their auditory perception to fit their culture, becoming deaf to speech contrasts that are not relevant to the language of their surroundings (i.e., their mother tongue). This well documented phenomenon is paradigmatic of the developmental origins of the human mind. Infants are well equipped to tap into sounds that are relevant to any human language, quickly narrowing their perception to fit the cultural surroundings on which they depend for their survival and care (Kuhl et al., 1992).

By 2-3 years, with the acquisition of language comprehension and production, the vocabulary of children explodes at a mindboggling rate. Via so-called fast mapping of uttered sounds to things in the world, infants acquire up to 20 new words a day, quickly picking up rules of grammar and producing sentences of increasing complexity. By 3-4 years, the typical child has developed the competence to engage in what amounts to human symbolic conversations, capable of comprehending, expressing, and articulating

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values in negotiation with others. Further development leading the child to adult linguistic competence can be viewed essentially as the fine tuning of competencies established in infancy, the pre-linguistic period of human development.

It is unquestionable that the human capacity for syntactic language is unique in nature. Many attempts at language learning in nonhuman primates in the past century, even for chimpanzees raised by humans from birth, failed to demonstrate skill levels that children reached by 2-3 years, in terms of vocabulary size, but more importantly in terms of syntactic production and comprehension (Tomasello, 2016). Clearly, a basic dimension of human as opposed to nonhuman nature is, as already mentioned, the symbolic nature of our mind.

Aside from being endowed with unique episodic and autonoetic memory capacities, it is also a mind that is unique in its ability for *recursive thinking* (I think, that she thinks that I think, etc.). It is also unique for its generative and creative capacity for representations of self and world, in other words, it is unique in its capacity for infinite explicit imagination as seen in arts and sciences for example.

In relation to our question of what may lay behind what we posit as the universal human quest for ecstasy, the symbolic human mind leads to generative and particularly creative ways in the service of questing and cultivating rapture. What may lay behind such quest cannot be just reduced to simple instincts or pleasure-seeking reflexes, nor any other learning mechanisms. It is part of the symbolic mind we evolved as a species; thus, its meaning goes beyond the product of mere reward seeking and conditioning. The mechanisms we should look for are, by nature, abstract and conceptual, not just physical or physiological, albeit correlating and supporting such abstract and conceptual mechanisms. This symbolic level abstraction is a human "privilege" as well as our self-conscious curse.

Human language and thought

Human language is more than just the ability for symbolic communication based on a shared grammar that we evolved as a species - a cardinal feature of our nature

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compared to other species. What is important to consider is that this way of communicating has bootstrapping effects on the way we think. Indeed, it is now well established that as children develop their linguistic abilities, such development is inseparable from the development of new ways of thinking and representing the world. In learning to speak and communicate symbolically with older caretakers, children also learn to parse the world in novel ways, creating new abstract categories of objects and things that they perceive and share with others. A novel word they hear pronounced by an adult in a specific context, like "dax" or the verb "daxing", will be immediately mapped onto the thing it is supposed to refer to in the world (e.g., Spiegel & Halberda, 2011). Young children display the remarkable and evolved capacity to abstract and conceptualize by grouping things beyond their surface characteristics. For example, already by the end of the first year, infants will "essentialize" what a class of objects may stand for. Researchers show that, using habituation, pre-verbal 9-month-old infants presented with various image exemplars of giraffes, will generalize their habituation to a novel exemplar of a giraffe, but not of a dog (Mareschal & Quinn, 2001). They appear to have abstracted the essential features of giraffe as a class of animals, above and beyond perceived surface characteristics like color or size. They abstract the invariants corresponding to this category of animals. These remarkable findings, now replicated in various ways using different experimental paradigms as well as other categories of objects like face or vehicles, point to two pillars of the human mind: categorization and abstraction. Both are defining features of our nature from the outset of development. Within the first months of life, infants are thus compelled to go beyond the information that is provided by their perception. From the get-go, they categorize and conceptualize what they see, hear, or smell, and they are inclined to take an implicit meta-step in what they experience subjectively. In other words, by categorizing and conceptualizing, in addition to perceiving and acting directly in the world through their senses, *they think.*

With the emergence of language, and symbolic interactions with caring members of their community (i.e., learning their mother tongue), this built-in capacity for grouping and abstraction will take a quantum leap. By the second year, *this abstraction is turned toward the self*, leading to the self-consciousness with first signs of a care for reputation, including social emotions like shame, pride, embarrassment, blushing or contempt. It is the peculiar specificity of humans Darwin wrote about and what we see as a cornerstone of our nature.

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Polarity in mind

Our brain like the brain of other animals is nothing but a complex collection of interconnected neurons that are either on or off, either stimulated or not, neurons by the billions in our case. At a microscopic level, there is no in-between, just go/no-go signaling. It is only through incredibly complex and fast group connections that meanings and more wholistic abstractions may be generated above and beyond the great cacophony of on/off nervous signals. Such network connections eventually lead to our own subjectivity or phenomenal experience (the redness of an apple, its taste, the detected sadness of a face). Accounting for such transformative neuro to subjective experience process is the perennial "hard problem" of consciousness, a continuing debate among contemporary philosophers, revived in the current neuroscientific and machine learning (A.I) research enlightenment (Chalmers, 2017).

At a cognitive and psychological level, which is the macro level of our discussion, an analogous account could be made as to how the human mind works at its symbolic and abstract level, how concepts and ideas are formed, by something that would resemble the basic dichotomous functioning of neurons.

Dual (opponent) mechanisms are pervasive in nature. They appear constitutive to all living systems, including our symbolic mind struggling to go beyond the natural inclination towards the binary, often convenient and simplistic dichotomies like right or wrong, good or bad.

We know for example that at the level of our vision, cell receptors (cones and rods) paving the surface of our retina are not merely sensitive to light stimulation. They do so selectively. Already at the level of the retina, competition exists. A cell receptor that is stimulated first will inhibit its neighboring cell in a well -documented mechanism of "lateral inhibition" (e.g., Balboa & Grzywacz, 2000). Suffice to say that already at the level of the retina, information is automatically filtered and enhanced by creating ready-made light and spatial contrasts that prep information for further cortical processing in V1 and beyond.

By analogy, concepts are ideas or theories that help us to think of the world in terms of categories. Grouping and categories are the stuff of conscious thinking, things that either

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belong or do not belong to a group, are same or different based on whatever "essential" characteristics, this categorization process being explicit or implicit. Racial biases, for example, rest on formed stereotypes. They are expressions of short-cut heuristics of grouping and categorization that we use to make implicit or explicit decisions, for better or for worse. These decisions are typically ultra-rapid, unconscious, whether for example to change sidewalk facing a pedestrian at night or to decide to hire someone over somebody else. Decisions call for contrast of alternatives, go or no go, yes or no decisions.

In both behavior and cognition, we are naturally inclined and pushed toward dichotomizing the world in black or white, either/or, right/wrong. This leads us to strange acrobatics that are very human-like (Rochat, 2021). This is particularly evident in the moral domain when we know that Hitler was a vegetarian or that those who pledged for equality, freedom, and human rights owned slaves, like George Washington, Thomas Jefferson, or James Madison. A father may be adamantly against the death penalty but may ask for the capital punishment of the bastard who killed his son. Parochialism (in-group/out-group contrasts) is not just human. It is pervasive in nature also when witnessing remarkable feats of courage and heroism of mothers trying to save their offspring kidnapped and in the claws of a much larger predator. Such feats are markedly less frequent when the victim is not genetically related.

At all levels, from the micro-level of on/off neurons to the macro-level in-group/out-group contrasts, dichotomizing is the rule. It provides the contrasts that are the building blocks of our thoughts. They are both the food and the object of our thinking conveniently leading to gross generalizations such as engaging in political argument about China, Russia, or Europe, clumping together and comparing millions of individuals above and beyond their various ethnicities, their cultural beliefs, and the great variety of their ecosystems. Although ruled by one constitution, the United States like all nations are made up of a melting pot of cultures and ethnicities, each with their idiosyncrasies that we grouped together for the sake of our political arguments. To think is indeed to group and therefore to polarize or dichotomize what we construe as real, yet merely a self-serving pixelized representation of reality that allows us to function and guide our actions in the world. But this construal is a construction by our embodied

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brain trying to sort out and create order in the cacophony of our memories and what is conveyed by our senses.

Bluntly put, re-constructing reality is the essential work of our mind. It is what it has evolved to do. On a proximal scale, it is what supports our individual survival and reproduction. On an ultimate scale, it is also what has supported our survival as a big brain Homo species that managed to strive and survive in the most variable, daunting, and rigorous climate and geographical conditions.

The basic polarized mechanisms of brain and mind processing, at the microscopic level of brain cells and by analogy also at the macroscopic level of thoughts, concepts and categorization, are all products of natural selection, if we take Darwin seriously. Through millions of years of evolution, these mechanisms were selected for their adaptive fitness, ultimately in order to survive and reproduce. That is the Darwinian, basic functional account as to why dual mechanisms exist as constitutive elements of mind and brain. They are the most efficient solutions nature found for living creatures to fulfill the ultimate goal of maintaining life on earth, in whatever form: what some philosophers like Schopenhauer (1859; 2008) construes as the ultimate Will of Nature. It would be, according to the philosopher, the real essence of the real which is the mysterious, untamed and seemingly perennial force of Nature we serve and that we may rebel against by, for example, choosing to die by suicide or engaging in heroic sacrifices. Suicide, in particular, is arguably a uniquely human proclivity that is part of our distinct self-conscious psychology. It is the human possibility of Hamlet's wondering of whether "to be or not to be", staring at a scull, or Albert Camus' first sentence of his "Myth of Sisyphus" stating: "There is only one true philosophical question, and it is suicide".

Dichotomized ways of being

Neuroscientists construe a resting state of the brain, what they refer to as a default mode of neural functioning: "a network of interacting brain regions that is active when we are daydreaming, not focused on the outside world, or otherwise engaged in a task or trying to reach a goal" (The Lab School, 2024). Accordingly, when the brain is

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involved in guiding our actions and supporting our decisions, it abandons its default mode to produce adaptive responses (e.g., find a way out, whether to ingest or not to ingest a food product, deciphering whether I have time to cross the road as the car is approaching, etc.).

This back and forth between default and active mode of functioning dichotomizes our wakeful ways of being in the world, either attentive, work oriented and actively engaged in the environment with goals in mind, or more passively idling in a default, less focused daydreaming mode. The boundaries separating these two kinds of fundamental conscious wakefulness (i.e., not comatose or in deep sleep) are fuzzy at best. Daydreaming and serendipity may be productive and major contributors to discoveries pertaining to highly complex rational problems. It is said for example that James Watson got the analogical insight of the DNA double helix structure in active sleep while dreaming of a spiral staircase. The legend says that Archimedes resolved the volumetric mass of things while relaxing in his bath. As the saying goes, we let problems sleep to eventually find their solution.

These two basic wakeful modes of brain engagement are upheld and used by an abundance of recent functional brain imaging studies. At coarser, much larger scale, and by analogy, there may be also some existential truth to the distinction between these dichotimized modes of being in the world.

The leisure-work contrast

Potlatch celebrations of Native Americans from the Pacific Northwest, or the complex, often exuberant festivities of gift exchanges in the South Pacific documented by early cultural anthropologists like Franz Boas or Bronislaw Malinowski, remind us that marking routine existence with celebratory contrasts is a deep trait of human nature. It marks the human way of existing in all societies as far back as we can reconstruct the life of our ancestors.

Our existence is indeed experienced and organized along major and well demarcated dualistic period switches. We typically experience these contrasted periods like day and

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night, switching from wakefulness to sleep, busy activities to rest, periods of intense and demanding activities to periods of leisure and relaxation, from active participation and effortful creation to passive relaxed entertainment.

Human societies from around the world are organized around such regular changes, marked by holidays, resting days, and other recurrent periods of festivities where members of the community are invited to switch modes of existence, allowing for festive, often transgressive and excessive bacchanalias over days as seen in the Rio carnival and other yearly festivals everywhere around the globe.

There is no exception to such collective and individual switch modes of existence. Spectacular sports like soccer, American football, or rugby are organized around seasonal and recurrent championships that create existential contrasts and excitement for billions of fans. It culminates with festive and often excessive periods of celebration supported by large economic investments (and hugely profitable advertising) as in the case of the yearly Superbowl championship including an intermission show that captures each year millions of viewers, an invitation to remotely join a collective effervescence boosted by heavy drinking and food.

Probably the most paradigmatic dichotomizing contrasts offered between leisure and working mode of existence, are the gigantic cruise ships operating all over the world with ready-to-indulge, leisure-oriented passengers on board, seeking service, entertainment, collective fun, pampering, and gargantuan all-you-can eat buffets. Those vessels are gigantic floating amusement parks offering group escape from a mundane, chore intensive, and basic survival existence.

In the same way, millions of sport fans share the excitement and collective effervescence around the unfolding drama happening in the stadium. Cruise ship organizers and sport promoters provide nothing but "fun times". They understand people's dual existence modes of work and leisure, their need to be entertained collectively, clearing out all references to routine existence, catering contrastive cheers and excitements.

As trivial and taken for granted as it may seem, it is very remarkable that since the beginning of recorded history, and even thousands of years prior, humans showed the

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inclination to create events, be they religious or sportive, providing pretexts for recurrent group effervescence, festive carnivals that allowed sharp contrasts with the default mode of mundane existence in which attention is mobilized in doing chores, earning power and money, hunting, gathering food, wheeling and dealing; all in order to survive, to plan for the future and to create some security for self and close ones, to pay one's dues. Across societies, such default survival mode is sprinkled with periods of permissive, contrastive excitement periods. Even meals in most prisons are improved for Christmas or for the New Year.

Relative lightness of being

"What are you doing in *real* life?". Such common questioning is again revealing of a deeply dichotomized, polar opposite ways of construing the values of existence. It implies that the questioned individual knows what real life is, understood as what surrounds work, in particular the handling of survival chores by "making" a living.

The work question is a short-cut social opener that yields a wealth of relevant information regarding a person's socio-economic status, level of education, origins, potential connection, etc. It also demonstrates the sharp contrast in our head between work (default/survival) and leisure modes of being. Such dichotomy serves us as a benchmark measure of status and reputation. This is true in all human societies.

In India, it is not uncommon to see men that do not cut the nail of their pinky finger not just for aesthetic reasons, but to advertise wealth status, the fact that they do not have to labor with their hands to survive. Same for tanning and traces of sun exposure that may be used for self-presentation in two ways: Chinese upper-class women tend to value whiteness of their skin to advertise the fact that they are not laboring outdoors to make a living. When going to the beach for a picnic, they tend to cover themselves from head to toes for that implicit reason. In reverse, being tanned in current Western culture is a sign of a healthy, good life with enough time to lounge in the sun. It is a status display of belonging to the privileged leisure class.

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In the United States, brown vs. black skin is a clear distinction and source of much racism among African Americans and their preferred aesthetic. Again, such colorist bias is linked to sun exposure in relation to menial jobs of survival, a proxy for social-economic status. Not that long ago, elite black colleges in the United States admitted students only if they passed "the brown bag test", i.e., that their skin was either as light brown or lighter than the generic color of the paper bag used in any grocery stores. Upholding such colorist view on socio-economic status, our own research in majority black regions of the world (i.e., Vanuatu in Melanesia), demonstrates that children do prefer lighter compared to darker skin, otherwise identical barbie dolls (Gibson, Robbins & Rochat, 2015). Other evidence shows that Western children, as they enter school, are sensitive and do tend to prefer others that have greater wealth and status (Shutts et al. 2016). The preference and identification with social power is deeply ingrained in us, and power as wealth entails, in our heads, the privilege of leisure time, service, and material abundance separate from the pressure of domestic chores, a counterpoint to mere survival and privileges. Children are universally sensitive to and drawn towards such a rich, privileged status. From the time they enter elementary school, they compare cellphones and sneakers.

The subtext to all this is the centrality of time for self, the freedom from demanding chores, the leisure to cultivate light, fun times, away from the heaviness of obligations and dirty chores, and free from the weight of imposed demands from others. Time for self is indeed a central commodity, the commodity of freedom. It is a universal human understanding.

The alienation experienced by enslaved individuals used and owned as a labor force to perform nothing, but painful menial works is a psychological wound that is transmitted across generations, way beyond its legal abolition, as demonstrated by the continuing sense of discrimination experienced in various ways by the black population of the United States, Brazil, or the Caribbean countries. Segregation persists under new disguises.

Interestingly, bringing water to our conceptual mill, great music and art were created by enslaved individuals, who managed to elevate themselves above their alienation, even using their depression and hardship as a way to escape it. Blues and jazz as musical

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forms take their roots primarily as a way out of the imposed chore existence that is slavery. It is the main source of their incomparable force. Chain gang detainees are enticed to sing doing hard labor. It helps the passage of time. It allows them to create some rapture away from a situation that befell on them with no foreseeable way out.

Human boredom and envy

It is no secret that most people in this world struggle in their mundane survival mode of existence. A majority struggles to survive and to pay bills. Many people fight loneliness or have conflicts with authority, and struggle against food scarcity and uncertainty. For this majority, many hurdles exist in the enjoyment of life with too few opportunities for reprieve or escape.

The wealth disparity at the dawn of the 21^st^ Century is particularly eloquent in surveys from the United Nations Developmental Program indicating that 80% of the world's population lived on a family income of less than $6,000 a year, with half of the world's population living on an average of two dollars a day (Kent & Haub, 2005; UNDP, 2006). It is most likely not much better today, probably worse with global warming and current wars. We don't choose our place of birth, nor the socioeconomic and psychological status of our parents. Only a few are the lucky ones.

For the vast majority, there is little room for leisure time and opportunities to evade demanding and repetitive chores due to noisy and crowded living quarters, not counting social tensions and violence that are a trademark of poor, densely populated agglomerations around the world. Food and life uncertainties are not amenable for diversion in leisure time, the focus being on the default mode of getting-by and surviving day by day. The quest for ecstatic escapes in leisure time remains a fantasy privilege for the few.

The dream of traveling and touring the world is certainly the most common ecstatic fantasy, at the top of people's "bucket lists" of fanciful escapes from daily repetitive survival chores. There is an irresistible pull toward escaping from being stuck in a

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routine, searching for rapture in places of reputed beauty, a major factor in global warming but not a source of major guilt.

Clearly, the engine of the growing mass tourism and leisure industry is the quest for rapture and service, finding contrast to a chore-filled existence that is predictable, repetitive and not fulfilling any dreams. Nothing worse than feeling stuck, aging in a place with no projects or perspectives, sinking in a mere necessary and sufficient survival routine. It is against this existential backdrop that the cultivation of leisure contrasts finds its universal expression. But leisure time is not just traveling and tourism, it is also festive.

Collective leisure contrasts are recurrent features that synchronize the life of individuals regardless of wealth and privileges. Unemployed inhabitants of crime infested favelas of Rio congregate with rich people for wild, effervescent parties, spending months in preparation for the February carnival at their samba school. Same for Mardi Gras in New Orleans or any yearly carnivals around the world. It is an opportunity for excess and permissiveness, often behind masks, using drugs, getting drunk, becoming explicit and letting loose of sexual fantasies, dancing and moving until exhaustion to start again the next day. The need for rapture, effervescence and escape does indeed cut across social and economic strata, under various forms and cultural disguises. It is clearly a human need that anthropologists have abundantly documented, across societies.

Young individuals coming of age in rural, isolated villages, with limited horizons for growth and ambition, are now connected to social media. They are particularly vulnerable to envy and depression as they contemplate the world through their cellphones. The gadget is a must have, now accessible worldwide for free, regardless of credit history, and in the most remote places. Such global exposure does not help the already dismal statistics on teenage suicides in the South Pacific, a real epidemic for the past 50 years, something like 3 times more frequent per capita than what is reported in the United States.

In a recent book ("the anatomy of loneliness") the Japanese-American anthropologist Chikako Ozawa-De Silva (2021), documents with chilling details a phenomenon that emerged in recent years in Japan. Some depressed young adults connect on the internet

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to organize collective suicide. They justify their desperate collective act with texts left behind such as "too lonely to die alone".

As an example of the global connections among young adults of vastly different wealth and backgrounds, I remember traveling in a truck on a muddy, chaotic dirt road in the midst of a rainforest on the remote island of Tanna in Vanuatu. Out of nowhere, we crossed two young native villagers, barefoot, each carrying a heavy load of coconuts on their head, gently walking while staring at the screen of their cellphone. An Irish company (Digicel) built towers in remote islands of the South Pacific (as well as in the Caribbeans), freely distributing cellphones to islanders, enticing them to "top-up" with minutes available for purchase in the tiniest shops of their villages with only a few rare generators to recharge their phones. Digicel minutes of connection immediately became a hot commodity in the South Pacific, becoming a parallel currency for natives in their transaction of food and services: "I'll give you 30 minutes for this pig, 15 minutes for this bunch of Kava roots" became part of business deals on the local marketplace.

Pigs and Kava are two major stapples in the South Pacific region of the world. Aside from being a major source of proteins for natives, pigs are recognized signs of wealth and power, especially in Melanesia.

The mild intoxicant produced by squeezing out the juice of Kava roots for drinking, is an obsession for most South Pacific islanders, often reserved for males only. In Western Samoa, and especially in Vanuatu and Fiji, most nights men assemble to drink Kava chitchatting quietly in the dark, mildly high and smoking cigarettes, spitting loudly the remnant of the muddy Kava drink, while women may play bingo in a separate communal hut under a blunt and bright kerosene lamp. Leisure time in Western Samoa, aside from Kava drinking, rugby, volleyball and bingo playing, is essentially organized around elaborated "dress-ups" for long Sunday services at the multiple churches of all Christian denominations that sprinkle the two main islands of Upolu and Savaii. Service is followed by a traditional Sunday meal (the umu) and a long afternoon nap. That is the strictly-followed collective Sunday leisure time in traditional Samoan society. The rest of the time, people work in the garden cultivating stapple food deep in the rainforest that they carry on their back sometimes for miles.

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Young adults from these remote regions connected to the glamourous global world out there through social media are naturally enticed to dream of some departure from what is offered by their traditional culture. It certainly doesn't help with the prevention of boredom and the envy to leave to fulfill promised dreams elsewhere. That is a major source of turmoil and tension among young adults within traditional rural societies worldwide. Disparity is highlighted and promoted in the race for the glamour and unbridled fun on the internet with the irresistible posting of peak moments in life via selfies, seemingly for nothing but to create distinction for self (a life well-lived) and envy for others (sorry you can't experience this, hence your life sucks).

Rapture in early human development

The evolutionary and ontogenetic roots of human rapture run deep. It lays in the basic polarized dichotomy of two basic subjective experiences express in all sentient species: the experience of *pain*, and its inverse, *pleasure*.

As for the dynamic dichotomy between approach and avoidance that characterizes the life and behavior of all living creatures, pain and pleasure orchestrate the valence and intensity of our subjective life from the womb, taking the form of distinct basic emotional expressions, either positive (approach) as in smiling, or negative (avoidance) as in crying or fear. One is a relief from stress (associated with positive feelings of pleasure), the other its inverse or tension (associated with negative feelings of displeasure). It is once again an opponent and dynamic homeostatic system.

Pain and pleasure are co-dependent and innate primordial subjective experiences. Neither need to be learned. They are expressed from birth and even prior. They are co-dependent in the sense that, from the get-go, one can only exist in relation to the other.

The point is that infants do not need to learn how to cry, nor to smile in *rapture*, in the dictionary sense of *feeling of intense pleasure or joy*. Although it is difficult in general, particularly with infants to measure the intensity of any feeling experience, below are two images of a 30-week-old fetus expressing a positive valence with a smile (left) and

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a negative valence with a frown (right), an index of some pre-natal subjective experience.

Figure 4: Positive and negative valence captured in the facial expressions of 30 week-old fetus

(from Hata et al., 2010, reproduced with permission).

These two opposite expressions are part of 6 basic emotions captured in the first weeks of human corresponding to specific muscular molding of the face (Sadness, Happiness, Fear, Anger, Surprise, and disgust).

During the first 6 weeks of life, the happy expression corresponding to rapture (*feeling of intense pleasure or joy*) is associated with feeding. Newborns displaying so-called reflex smile with lifting corners of the lips and an expression of relaxed elation triggered by the well described opioid system associated with sucrose ingestion. Sucrose has a noticeable calming effect associated with pleasure and relaxed behavioral expression in the newborn. It can even reveal remarkably organized sensorimotor coordination like the hand transport to the mouth, which opens in anticipation of manual contact (see below the successive images of hand-mouth coordination by a freshly born infant whose umbilical cord was just clipped, Rochat et al., 1988).

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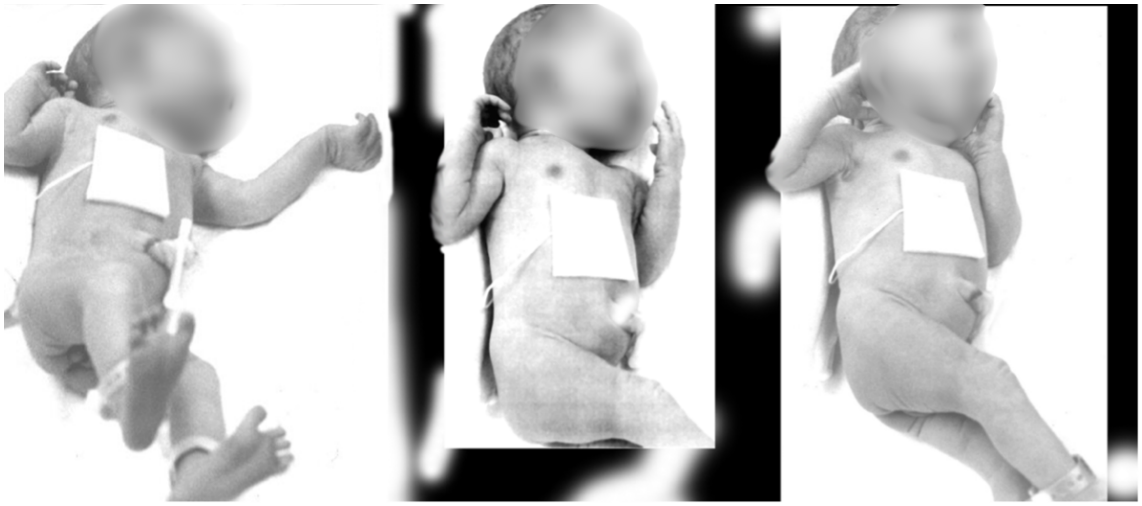
Figure 5: Hand-mouth coordination in a 3 minute-old newborn



(Photos by the author of his daughter Cléo).

Novel social rapture by 2 months

By six weeks, the reflex expression of positive rapture associated with feeding is transformed with a radically new expression of joy in the context of face-to-face, dyadic exchanges with others. It is the emergence of *socially elicited smiling*. This marks a qualitative shift, what we label "the two-month revolution". It is a time when parents commonly report discovering a person in their infant, the child starting to actively respond to caregivers and social exchanges, engaging in face-to-face proto conversations that consolidates bounding and provide new grounds for mutual character analysis. It is the mark of first reciprocal exchanges and the co-construction of shared experiences (intersubjectivity) mainly oriented toward mutual rapture. Adult caretakers typically aim toward the creation of a relational excitement or acme, leading the infant toward rapture expression by bursting into a smile.

Figure 6: Socially elicited smiling in a 2-month-old

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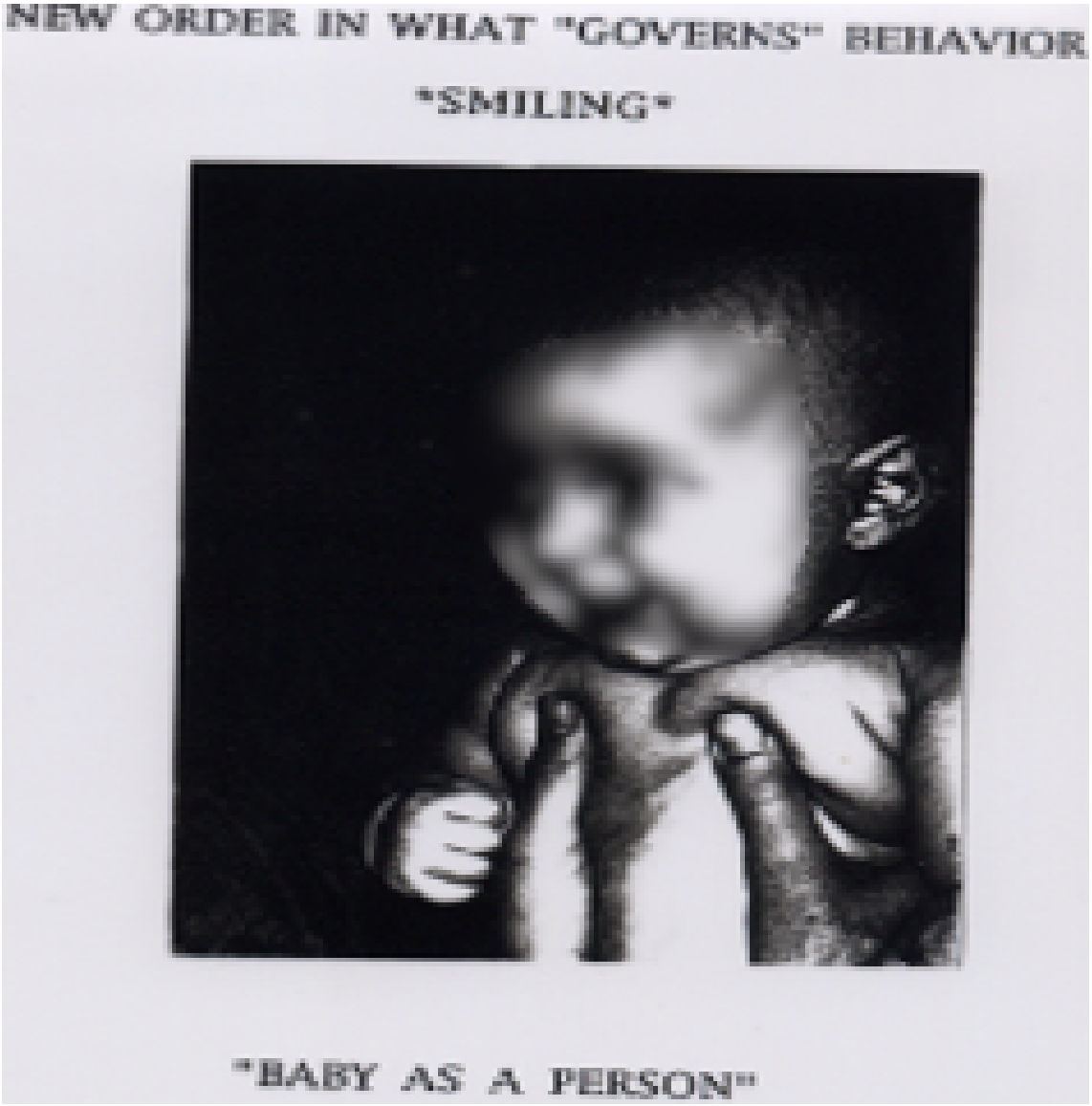

(Photo by the author of his daughter Cléo).

The infant socially elicited smile is the ultimate proxy for the happy, pleasure infused state of the infant that is searched for and scaffolded by the adult who cannot help but address the child with a high pitch voice, mirroring and amplifying the child's facial and vitality expressions.

Looking straight into the infant's eyes, infants are born well prepared to tap into the adult's intent. Research shows, for example, that newborn infants look preferentially to images of an adult looking straight into their eyes compared to the image of an adult averting their gaze (Farroni et al., 2002). Infants are born with a sensitivity and

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preference for pupil-to-pupil contact, attuned to what is a crucial control variable of mutual exchanges and bounding.

The format of these early interpersonal exchanges leading to social excitement and joy have a typical communicative frame. It corresponds to the "proto-narrative" format expressed in the classic peek-a-boo game that is often initiated by adults. It is the standard repetitive 3 phases format of tension building, peak tension, and then tension release (e.g., hiding the face behind hands, then revealing it; or scaring the child with "I am going to get you..." often ending with a tickling, (see Rochat, Querido & Striano, 1999). This is a standard way and frame found in all cultures to promote acme of joyful excitement in the young child. It universally works.

Again, infants do not need to learn the acme of pleasure and to manifest joyful rapture. They express an unmistakable positive affective state, even in-utero. However, what determines such expression is endogenous at first (feeding and the acme linked to the engagement of the infant's opioid system and ensuing effect of endorphins), becoming by the second month newly determined in the social context of face-to-face exchanges with scaffolding others.

Revolutionary conundrum by 9 months

Beyond two months, with drastic gains in postural control and behavioral freedom, infants grow in independence from others, starting to initiate exploration of their physical environment. By six months their attention turns more toward objects (Rochat, 2006). They abandon their primary attention to people to focus more on physical objects and what they can do.

Because they still need the proximity of familiar others and are weary of losing their attention, by 8-9 months infants start manifesting the so-called "stranger's anxiety". They begin to express negative emotions toward novel people who try to pick them up or get too friendly with them. It is at the time that they typically gain mobility on their own, driven by an irresistible need to explore the environment beyond the secure base of familiar caretakers.

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By nine months, infants resolve the conflictual fear of separation and the incompatible urge to explore the world by developing and starting to engage in joint attention (Rochat, 2006). Accordingly, they resolve such conflict by trying to engage the attention of adults in their foray of the environment. They start pointing to things and calling for the attention of others while away from them. They somehow create for themselves an attentional leash that is presumably the source of the comfort they need in order to separate themselves from the secure base of the adult. There is indeed an unmistakable pull for infants to discover newly acquired degrees of behavioral freedom and the novel effectivities they afford (i.e., self-locomotion).

At this juncture of development, the novel propensity of young children towards joint attention helps them to resolve the basic conundrum between the drive to explore and the separation it entails (Rochat, 2009).

Aside from putatively resolving such a conundrum, the emergence of joint attention is also a crucial steppingstone in children's cognitive development. It leads them to develop symbolic competence in relation to others. For example, research shows that infants' relative engagement in joint attention by 9-12 months is predictive of their later language development, more specifically the amount of their vocabulary by 2-3 years (Tomasello & Farrar, 1986). Joint engagement with others is one key that appears to open and allow the young child to pass through the human symbolic gate.

In the affective and relational domain, infants from around 7 months also begin to show renewed engagement initiatives. They become more explicit actors and not just passive recipients or simple responders to others' initiatives in the quest for happy exchanges. They begin to initiate rapture by clowning and monitoring their audience, repeating what leads to positive reactions from the audience, even if it was initially accidental. They will tend to re-engage an adult adopting a still face, suddenly freezing during a face-to-face exchange. Prior to approximately seven months, it is well established that infants respond negatively to the sudden still face of a social partner with emotional withdrawal, negative affect and distress (crying) when the still face is prolonged. By seven months, the infant becomes an active creator and corrector of ill- or interrupted exchanges with others, such as in the case of a sudden still face, trying to bring back the still-faced adult toward a previous happy rapture (Striano & Rochat, 1999).

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Self-consciousness proper by 18 months

Beyond nine months, aside from acquiring greater postural control and getting at the threshold of the symbolic gate, infants also develop budding self-consciousness: *the ability to reflect upon oneself as an object of contemplation and evaluation*.

Self-consciousness (another trait seen as constitutive of human nature) will become explicit when children from around 18 months will recognize (objectify) themselves in mirrors, showing embarrassment. In the meantime, they also start using personal pronouns like "me" or possessives like "mine!" in conversation with others.

As precursor signs of self-consciousness, by fourteen months, and not by nine months, infants start to show clear signs of projecting themselves into the perspectives of others. They start perceiving others as a "looking glass self". For example, they prefer to interact and pay attention to someone who imitates them rather than someone who is simply contingent, not copying exactly what they are doing with the same object. They start becoming explicit in noticing that someone is imitating them by playfully trying to trick them, suddenly accelerating or switching their gestures (Agnetta & Rochat, 2004).

From around eighteen months, infants start to show first signs of a budding sense of reputation: the calculation and systematic quest for positive valuation from others. Children, for example, will start to avoid performing actions that may be disapproved by an adult. They will however rush to do it if the adult turns her back (Botto & Rochat, 2018). It is also from this time on that they will become better at lying to cover up a transgression, starting to engage in image management (Rochat & Guo, 2021).

Developmental summary

This rapid survey on rapture in early development was meant to point that the *feeling expression of intense pleasure or joy* (i.e., rapture) is an innate subjective experience. It is reasonable to think that, in general, subjective experience finds its roots in the womb. There is indeed good reason, for example, to posit that pain (the opposite of rapture) is most likely present in fetus as young as thirty weeks, with all necessary

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underlying cerebral systems formed and responding to painful stimulations (Anand & Hickey, 1987). Externalized human fetuses show instinctive behavioral avoidance via bodily refraction in response to a needle prick (Hooker, 1952). Approach-avoidance and feeling experiences are expressed by mid-gestation, and we have seen that positive as well as negative facial expressions are detected in fetuses by the last trimester of pregnancy.

We may thus conclude that the positive-negative polarity of feeling experience (what is it like to be in pain or in rapture) has pre-natal roots. We can also conclude that babies are born in a world of values, things that drive them towards approach (e.g., sucrose taste) versus those that drive them towards avoidance (e.g., lemon taste), each associated with specific facial expressions. Newly born infants do prefer some things over others. They possess an affective compass that is a part of their evolved biological make-up. Elation at birth is supported by neuro-chemical substances (endorphins and the opioid system) that are pain reducers associated with intense pleasure as seen in the unmistakable elation of newborns after a good feed, with total relaxation, arms spread out, smiling with their eyes rolling back behind their eyelids, not unlike junkies following heroin or morphine injection (see Blass, 1987).

Rapture as intense pleasure changes expression and meaning by 2, 9, and 18 months, as the child becomes increasingly attuned to their social and physical environment. Their elation is triggered, not just by food, but in relation to others, manifesting rapture in social face-to-face exchanges by 2-months, or actively bringing with them the attention of others while exploring the environment away from the secure base of familiar individuals with the emergence of self-locomotion.

By the middle of the second year, infants become active in the way they present themselves to the world, seeking approval and positive values through the evaluative eyes of others. The quest for rapture becomes self-conscious (Rochat, 2018).

Human play rapture

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Play, games and gambling are expressions of the instinctive drive to get absorbed and excited away from a mundane, dead-ending default survival mode. It is the mark of a deep quest for rapture and ecstasy, a quest we do share with other animals. However, human play is unmatched when by the end of the second year, it becomes both self-conscious and symbolic.

Roger Caillois (1958), in his classic taxonomy of cultivated human games, tries to show that there are limited ways in which humans tend to create playful rapture. In general, curiosity is picked, and we get absorbed witnessing the unfolding of a story offered to us, often the re-enactment (*mimicry*) of unexpected events that are real (in which we can project) but imaginary (allowing for the fantastic). That is the case in all spectacle arts (movies, theater, sports, etc).

Other human games, whether under rule constraints (*Ludus*) such as in sport competition, or free of rules (*Paidia*) as in children's roughhousing, all combined also surprise and renew attentional focus or absorption. The ultimate motive to engage in gaming or play is to get lost, abandoning ourselves to the unpredictability of events that unfold in front of our eyes, eager to know what is going to happen next and how it will all eventually end. This is what happens in competitive spectator games (*Agon*) in which a drama unfolds. We join with others in search of curious excitement and surprise, all teased by unpredictable outcomes and different previsions that often translate in yet another superimposed gambling (bets). In games of chance (*Alea*), gamblers throw dice in quest of surprise and excitement, under the spell of intense absorption for its unpredictable, yet desired outcomes.

In the vernacular sense, human plays and games are distractions or "entertainment", self-conscious activities toward diverting oneself from mundane mortal existence, a relief from self-conscious being. Human games are thus different from all other animal plays or animal activities with no apparent survival values such as protecting, procreating, or hunting for calories. Most animals engage in such activities, especially when they are young. Because of their symbolic, ruled based, and recursive (self-conscious) dimension, human plays and games are unique and incommensurable compared to the play expressed in other species.

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Human motives to play add a systematic distraction dimension rooted in self-consciousness and mortality awareness. We self-consciously entertain ourselves trying to get out of mind, trying to escape self-rumination and dead-end cogitation. Like all forms of human art, human play is an escape from self-conscious mortal reality.

At a proximal level, it is a cultivation of fun times that contrast with survival chore existence. However, in the context of human self-conscious and mortality aware existence, human play is ultimately a deliberate attempt at numbing such awareness in ecstasy. Play, like humor, is escapism.

Human laughter and surprise

Laughter is not proper to humans as some have proposed. Chimpanzees, aside from making distinct play faces, also emit panting sounds that are homologous to human laughter. Aside from all great apes, dogs, rats, and even penguins (an avian species) emit laughing-like sounds when tickled. Interestingly, as for humans, no such sounds are expressed when self-tickling. The robust fact that mirth is not associated with self-tickling indicates that the element of surprise and the loss of intentional control is an important component of laughter, in humans as well as in some nonhuman animals.

The experience of surprise means literally to be seized or overtaken, the word coming from the Old French *to seize* in reference to a stealth military action. Thus, surprise has something to do with rapture and ecstasy, both considered as the experience of being unexpectedly and uncontrollably seized by a peak feeling experience of delight, but also potentially of fear or sudden stress, the source of thrill and suspense experienced in movies for example.

The fact that one is significantly less subject of mirth and laughter when engaging in self-tickling confirms that the surprise, sudden absence of control, and in general the *unexpected* is a major feature of what spins us into uncontrollable rapture and ecstasy, away from our default being-in-the world survival mode (e.g., Proelss et al., 2022). Being tickled by another causes defensive stress under the spell of a playful, yet

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forceful physical entry by another into personal space, (vulnerable regions of the body, leading the tickled to plead vehemently for the tickler to stop).

As many philosophers have pointed out (see Henri Bergson and Arthur Koestler in particular), humor and the unexpected are inseparable. The jokes of a standup comedian unfold with a twisted end, and a fall that catches us in surprise. Typically, the most outlandish, unexpected twist correlates with the level of rapture produced in the audience. Funny jokes and funny people are playful in generating surprise or some sudden break from what would be normally expected: an important general walks with dignity and composure in front of his battalions, only to trip and fall by stepping onto a banana peel placed by some mischievous soldier for revanche. The hilarious outrageousness of the Marx Brothers revolves around breaking expected manners and rules in society. They create mayhem in all situations. Stand-up comedians like Lenny Bruce or George Carlin let loose words and ideas that are radically counter current. They are humorous for their outlandish, courageously twisted truth, the exact opposite of proper conventional thinking. In other words, humor is driven by the exact opposite of what would be expected. Surprise is what tickles and seduces us. It picks our curiosity.

The peak feeling experience of surprise is always necessarily accompanied by a renewed attentional care (from Latin cūriōsus "careful, inquisitive"). There is indeed a causal sequence between surprise and curiosity as renewed attentional care, leading to focus and absorption, sometimes cultivated for its thrill and enjoyment, its potential for rapture and ecstasy, as in games. Surprise and curiosity form together a major drive pushing us to watch movies, go to the theater, spend time in museums, watch sports and in general, play games. Surprise and curiosity are also what drives human learning and intelligence from pre-natal time.

The most primitive form of learning is habituation, a mechanism we share with all living systems. It is the mechanism by which response to a repeated stimulation tends to diminish as a function of its repetition.

At some low level of description, such a phenomenon may be accounted for by so-called neural fatigue or saturation of nerve receptors. At a higher level of description, it may be accounted for as expression of "boredom" and the need for novelty. These different accounts may be tested with different predictions. The fatigue interpretation

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may be supported by showing that the habituated organism becomes passive and inactive. The higher boredom account is supported when for example a newborn infant, following repeated sound stimulation, will not only stop orienting toward the sound source in space, but will show an active propensity to orient away from the source. In that case, we may infer a need for novelty, to reduce presumed boredom (Weiss, Zelazo, & Swain, 1988).

Regardless of interpretation, habituation is probably the most primitive and generalized learning mechanism among living systems. This is shown by the simple demonstration that a variation in the repeated stimulation (change of pitch, luminance, or the prosody of an utterance) leads to a sudden regain of a response as evidence of so-called "dishabituation". Dishabituation necessarily means that the organism has discriminated, hence perceived and learned the novel stimulation as new (i.e., different from the habituated one). This simple, easily measurable phenomenon has been used extensively and with much success by infancy researchers to probe the roots of cognition, showing that newborns and even fetuses learn and discriminate the voice and particular smell of their mother (DeCasper et al., 1994; Marlier, Schaal & Soussignan, 1998). Habituation/dishabituation measurements led to the discovery of what babies are born seeing, hearing, and even thinking. It contributed to a radical re-description of early competence away from the "blooming, buzzing, confusion" proposed by William James (1890) and others characterizing the starting state of human cognitive development.

Early and possibly innate intuitive physics (that an object may be predicted to fall rather than rise or that an object cannot be at two places at the same time) was established using violation-of-expectation paradigms by hundreds of experiments starting in the 1970's in multiple baby labs. In these experiments, young infants, typically 2 months and older, are familiarized with a particular event (e.g., an object disappearing behind an opaque screen) followed by test trials in which the event is repeated but this time with the screen lifted, either revealing the object (possible outcome) or revealing an empty stage, hence that the object surreptitiously vanished (impossible outcome). What is measured is the infant's reaction during the test with the impossible outcome, measuring whether they regain visual attention as a sign of "surprise" in this testing condition compared to the possible outcome test. This so-called violation-of-expectation paradigm demonstrated - among much other evidence - that from 2-4 months, human infants

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possess core principles on how objects move in the physical world, that people plan and show intentional actions, or even that early on, infants expect a social agent to help rather than hinder the action of another (Spelke et al., 1992; Hamlin, Wynn, & Bloom, 2007; Woodward, 2009).

All in all, the wealth of new findings about the foundation of human cognition in development using the violation-of-expectation paradigm tapped into the fact that, in all evidence, surprise and curiosity are built-in systems driving behavior and knowledge from the get-go. It is the expression of our innate propensity to predict outcomes based on prior, possibly innate knowledge and representations on what the world is made off and how people and things are supposed to behave (*priors* in Bayesian terms). But most importantly, it reveals an innate or very early propensity, not only to predict but also to renew efforts in making sense of what is not predicted, which is a source of novelty and discovery, both captured by the phenomenon of surprise and curiosity expressed from the get-go.

Anticipation and prediction are the main functional characteristics of the brain and cognition that we share with all living creatures endowed with a nervous system. However, what may be specific to our species is the drive to abstract meanings and coherence, the human insatiable quest for hidden causes, above and beyond the information given by perception (for early evidence see Perez & Feigenson, 2022). What may be unique to us is our relentless inquisitiveness and conceptualization, our search for implicit and explicit abstract principles. It is the human inclination to infer essential, often irrational characteristics in our perceptions and decisions (see human biases and stereotypes discussed in a previous section).

A side effect of humans' curious drive to figure things out and to create coherence in their own experience of being is both an endowed wealth and a curse from nature, our poisoned gift. It is the curse of having evolved a rational and ruminating mind, self-consciously aware of its own mortality, arguably the source of incomparable, unresolvable conundrums that other species would be spared of. If it is a reason for madness, such gift is also what underlies arts, sciences, religious, and ritualistic experiences of our being. Self-consciousness is the source of human metaphysical struggles. It is what we try to resolve and ultimately evade from through quests and

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cultivations of rapture and ecstasy, trance states and transcendence, the construction of immortality narratives.

Developing levels of wakeful awareness

Being entails the navigation through various levels of wakeful awareness. We may use the metaphor of an onion in its growth to describe how these levels emerge in human development, layer by layer. It is between these layers of wakeful awareness that we end up navigating through our wakeful existence (Rochat, 2009).

Aside from being asleep or in a coma, we may just be *aware* of being alive, as when we emerge from a deep sleep or total anesthesia. We open our eyes and are suddenly aware of our presence in the world. We may then recognize our nurse, doctor, or wife, as well as familiar objects, becoming *co-aware* of self and world, connecting our embodied self with a known reality. We then, eventually, may transit into a state of *consciousness* in which we know that we know. In our example, it is the state in which we now transit reflecting and reconstructing what happened, why we were put down into deep sleep and what may happen next. Finally, by asking our doctor or nurse how the intervention went, listening to the health report, responding to questions on how we feel, we become *co-conscious*, an explicit, also meta-level of shared experience via language and other symbolic vehicles (gestures, drawing, writing, etc.).

This description can be viewed as the repertoire of possible general levels of wakeful awareness we develop from the onset of our subjective, feeling experience -- from the time, inside the womb, we begin to experience pain or pleasure (see discussion above).

The distinction of the human levels of wakeful awareness from other animals' is the level of both consciousness and co-consciousness emerging by the end of the second year. Again, it is when children become self-conscious proper, able to re-cognize themselves in mirrors, starting to use personal pronouns and adjectives, as well as showing budding signs of self-image management and a care for reputation. It is also by this age that young children start to engage in intentional deception producing their first

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lies. Accordingly, at this developmental juncture, the child takes a meta-step toward cognizing self and others as well as their own situation in the physical world.

Human reflective rumination

Self-consciousness and explicit metacognition (knowledge of knowing) are products of a secondary symbolic level in information processing. It corresponds to the reflective loop that enables us to engage in recursive thinking and the processing of meta-representations (i.e., representations of representations).

Literally, like no other species, we ruminate ideas, regurgitating what we already chewed. We re-process again and again the same thoughts stored in memory, an endless revision, compelled to re-describe what we already know, or think we know.

The human reflective loop is like a drill, the human drill. It can either drive through a problem and lead to novel solutions, or it can often bore to nowhere, becoming a source of uniquely human angst, stress, obsession, and painful neurotic hesitations. It is also what is behind human inventiveness, our ability to regulate communal living and cooperation, generate engineering feat, progress in sciences, and endless renewal in artistic expressions. It is also what is behind human unique genius for wars and destruction, massacres and ideological crusades, our willingness to die for a flag or abstract ideas.

Human reflective loop is the source of scandalous realizations, in particular that all things must pass, including one's ruminating self. It is the necessary realization that one must come to term with a no-way-out which nonetheless calls for some escape routes. It is the source of human metaphysical angst and fidgetiness leading us to question our place in the universe.

Aside from hopeless denial, it may be the stem root of all our active quests for rapture and ecstasy which may be primarily the desperate human attempt at suspending the self-conscious drill of recursive thoughts and rumination to get out of mind. It may be the source of the various ways we attempt at reaching some reversion of causality: ways to abandon control of ourselves by ourselves, the way we attempt regardless of cultures, to

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let loose of self-control either *internally* (e.g., meditation, drugs), or *externally* (e.g., trance and group rituals).

Human need to escape reason

Scepticals philosophers of ancient Greece coined the word *èpoché* to capture the drive to *suspend rational judgements*, creating doubt and uncertainty in judgement calls. It literally stands for the arrest or interruption of mental processing, hence of human rumination. Interestingly, the word epoch derives from such an original meaning. It is linked to some suspension of the present, something that is not anymore under our control, something that escapes us.

The quest of rapture and ecstasy entails *èpoché*, the drive to abandon and let go of something, first and foremost, self-conscious thoughts (get out of mind). These thoughts encompass all our worries, issues and problems, the human quest for transcendence, literally trying to go above and beyond oneself (from the Latin *transcendentem* , meaning "surmounting, rising above). It is also the drive to let go of stress and existential vicissitudes, finding new roots and meaning for being alive with the ultimate goal to by-pass and control the stress of inescapable self-conscious worries, particularly those surrounding the scandal of death. Beyond pure hedonism, it is the deep drive to transcend a mundane, repetitive, aging, worrisome and deadly existence, the universal drive to find meanings and reasons for being.

For the religious and agnostics, there is an analogous quest for rapture and ecstasy as different ways of sustaining our mortal destiny. This, we propose, may be the common denominator we see in all the various human quests for rapture and ecstasy, the psychology linking all trance phenomena and the generalized human drive toward existential transcendence: "surmounting and rising above" self-conscious being by abandoning oneself to other agentsL, reversing the own evolved natural inclination toward self-agency.

The drive to escape and reach *èpoché* is what we see as the link of all religious practices, the pervasive use of drugs, the ultimate aim of prayers, meditation, and all

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trance-inducing rituals, including movies, theater, the immersion calling of all art forms, particularly in their creation like the immersion into writing, painting, or playing music, but also among all spectator sports and thrill seeking behaviors like mountain climbing or free diving.

As a case in point, like all religions, Buddhism is an explicit way, through particular practices, to escape our doomed suffering, learning to let go of all our self-conscious expectations (e.g., Suzuki, 1970). Jolt producing Haikus, meditation, hypnosis, thrill seeking behaviors, the joining of collective effervescence, drug addiction, or the cultivation of sexual orgasm, all would have in common the drive toward self-abandonment and the quest for a reverse agency. This is what we eventually will try to demonstrate by reviewing universal features of what we see as the human basic drive to transcend or "rise above" oneself and cultivate *èpoché***.

As suggested so far, above and beyond simple hedonistic proximal motives, the human quest for rapture and ecstasy is driven by the ultimate motive of reversing our deep-seated and unique sense of self-controlled agency, something we evolved as a symbolic "big brain" species. If the main function of any brain is to predict what is going to happen next based on prior experience and knowledge, the human brain is likewise endowed with unmatched capabilities for storing representations that project far back into the past and far forward into the future. Again, aside from language and symbolic functioning, our brain enables a unique ability to reflect via recursive loops of meta-thinking about self and world. If such ability helped our species to successfully adapt and create means to survive and strive on all corners of the planet, it also triggered necessary realizations of truth that are inconceivable, especially the inescapable truth that anything must pass, including oneself. This, arguably, would represent the human curse, our poisoned gift from nature, a defining feature of human self-conscious psychology.

It is in relation to mortality awareness that, we think, the human quest for rapture and ecstasy needs to be interpreted. The proposal is that mortality awareness and the drive to overcome its conundrum constitute the meta-motive behind such a quest. As we will try to show next, this is particularly evident when considering the èpoché and transcendence associated with trance phenomena.

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Trance (crossing over)

The word "trance" comes from the Latin word "trānseō", meaning "to cross over" and the old French "transe" which stands for the fear of coming "evil". Interestingly, and in congruence with our meta-psychological interpretation, the stem lexical root of trance derives from the Latin verb *transire* which stands for to trespass or to die (to go beyond). Until the 17^th^ Century, the word trance was used in reference to agony and death.

The meaning of trance is, already in its etymology, inseparable from the idea of death and the trespassing of life. In today's usage, it refers primarily to the state of someone under the influence, and in particular, "magnetized sleep" or hypnosis. But it also refers to a state of rapture and ecstasy, as in falling in love and being in a state of amorance.

The etymology of trance is an intransitive verb (crossing over) that captures a change, a jump to something that is either opposite or radically different. It is, in essence, a dynamic phenomenon leading to altered states of awareness. It is relative to change, something that would correspond to a radical switch in the subjective experience of being in that body and in this world. In a sense, it is also a transitive verb transporting a person from one state to another, but always with a return to the original "default" state of mind.

In general, trance manifests itself as a transformation of our sensations, our perceptions, our thoughts, and in the case of possession rituals (speaking tongue, shamanic trance), a profound dissociation, a transformation of the person as a whole, becoming inhabited by someone else, subjectively a radically different living creature, inhabited, impersonating and feeling like someone else in body and mind. Trance stands for a sudden *psychic metamorphosis*, a radical change in mood and behavior, but also in some cases of personality.

We may say that in the most generic sense, trance stands for the dynamic transformation leading individuals to abandon their default experience of being, suspending for some periods of time reason, inhibition, and self-control. This suspension may have different forms, either a suppression or a transformation. It may arise from the abandonment of reason as in Zen meditation, or the lifting of inhibition in the experience of rapture and

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ecstasy, whether it is sexual orgasm, music and dance rapture, under the influence of drugs, or participating in collective trance during a sport event.

We can already see, with such definition, that as a temporary psychic transformation, trance has various depth in both meanings and consequences, from the rapture and trance state in the context of sport, to the self-abandonment in meditation, prayer and dance rituals, but also when deeply immersed in playing music, writing, or even parachuting off an airplane for the thrill of a free fall. All are connected to states of ecstasy and the quest for some rapture.

Trance as a process is thus nothing but a psychic transformation leading to peek states, either peek excitement or peek peace and relaxation, a transformation from a default state of mind associated with survival contingencies. The consequences of such transformation, - be they curative, novel insights, or a temporary relief from default existence - are always recounted, reflected upon, and gauged following a return to a default mode of embodied awareness. Shamans may return from what they call the invisible world with healing messages, demonic spells, or oracles from ancestor spirits. They often come back to convey messages and healing omens for particular individuals of their group.

Following hypnotic trance, one may gauge the alleviating impact it had on symptoms experienced in the default mode of being, whether these symptoms are anxieties, insomnia, addiction, neurosis, or even the alleviation of pain during surgery procedures. All are, typically, post-hoc explicit evaluations when returning to a default, rational mode of individual functioning.

Trance as pretend play of death

Trance phenomena capture temporary psychic metamorphoses and dissociative transports. They are temporary forays into alternate mind states and phenomenal worlds with always a guaranteed return to a default mode of functioning that may become improved or healed in some way. They are psychic voyages with a return ticket. Trance states are often experienced and cultivated as transient but with long terms benefits and healing

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power. They are revealing and may lead to sudden transformative discoveries as reported in successful one-shot hypnotherapies or ayahuasca rituals.

The cultivation of trance states may be seen as nothing but toying with mental states mimicking death. It would be a play with death with, however, a suspension of its terminal and final transformation knowing that there is an expected return to a default state of being.

The cultivation of trance states may be reasonably understood as the expression of a human need to conjure up death, albeit with an expected return to default being. As for the quest for rapture and ecstasy, trance is the ultimate human gaming experience, driven by the scandalous conundrum of death.

As a case in point, sexual orgasm, the oldest, most universally sought after and cultivated ecstasy (not mentioned so far, yet crucial for our argument), has been coined in the medical profession since the 16^th^ Century in France as "the small death" (la petite mort). Orgasmic small death stands for a temporary collapse into a swirl of pleasure chills thought to mimic what may happen in definitive death to come ("the big death"). It is yet another object of human self-conscious rumination and wishful simulation of what may happen in our mortal passage.

Wilhelm Reich in his 1927 book on *the function of the orgasm*, claims that individuals' psychological health and wellbeing depends on what he calls "orgasmic power". This power is the capacity to abandon oneself in the acme of sexual arousal and during intercourse leading to orgasmic sexual rapture and ecstasy. Orgasm is often described as a "fainting fit", a "nervous spasm", a temporary state of "unconsciousness". It is also described in reference to the deep state of embodied calm and relaxation that follows intercourse.

The idea proposed here is that what underlies the human cultivation of trance states would be, in general and at least in part, the expression of a deep need to contemplate death through temporary embodied transformative re-enactment. It would be playing and trying to re-enact what may be the ultimate experience that we will never be able to experience or recount as we need to be in order to restitute.

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According to this idea, the common denominator of all trance practices, but also all human quests for rapture and ecstasy would ultimately be the drive to come to terms with and *conjure up* (i.e., bring to mind, evoke or imagine) the human impossible conundrum of death that drills deep into the human self-conscious and symbolic mind.

Again, human mortal sense is the ultimate source of a fundamental obsession I have been trying to link to the human quest and cultivation of rapture and ecstasy. It is what possibly underlies all forms of human ritualistic practices, artistic raptures and sublimation, whether expressed through joy, fear, religious ecstasy, or denial (Becker, 1973).

To let go of our default mode of existence, dictated by the contingencies of mere survival and comfort maintenance, engaging in play activities suspending such default mode and returning back to it, is a fundamental back and forth game played by all humans and cultivated in all human societies as far back as we can reconstruct our origins.

Humans brought play and suspension of reality to incomparable levels of creativity with a mind that is both symbolic and self-conscious, ultimately aware of the necessary future demise of their own self-agency, hence the demise of their being.

Playing back-and-forth game of imagined self-abandonment, returning to a default mode of existence, is the self-conscious mind game that we see instantiated in all our quests for rapture and ecstasy, all the trance states we cultivate since the origins. It is also, by analogy, what babies do from birth and prior, experiencing the limits of what their body affords for action and exploration.

Once starting to become self-conscious and symbolic (from approximately 18 months), children start to play with their imagination by impersonating and seeking altered states of consciousness and other dissociative experiences that we inevitably cultivate throughout the lifespan.

Centrifugal vs. centripetal rapture

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If we try to create a taxonomy of trance states, probably the most basic distinction to make is between two basic forms of rapture: *outward* and *inward* raptures.

Outward raptures are associated with a fusion process with external entities or forces, as in the case of falling in love with another person or falling into devotion and admiration for a charismatic leader. It is the product of a particular link to outside agents.

Inward raptures, inversely, are associated with altered states of mind that are cultivated inwardly within the individual (e.g., mindfulness, creative flow, self-detachment, etc.).

We may call the first a centrifugal rapture (an outward self-abandonment), the latter a centripetal rapture (an inward self-abandonment). The centrifugal rapture is extraverted, as in the case of festivities, sport watching, dance, rave, or any spectacular raptures in movie watching, reading or theater immersion. In contrast, the centripetal rapture is introverted, in the sense of being specifically oriented inwardly, instantiated from within the individual as in the case of drug rapture, mindful meditation, or hypnotic trance.

In both instances of centrifugal and centripetal raptures, there is self-abandonment and reverse agency away from the default mode of being in the world, but in opposing directions. Both have in common the letting go of a default mode, the main psychological characteristic of all trances, regardless of their engine.

The primacy of centrifugal rapture

From a developmental perspective, from 2 months infants opens up to the sharing of experience with others (see previous section). This is indexed by the universal emergence of socially elicited smiling, the first sign of subjective rapture other than the "high" expressed by newborns after a good feed which is associated with sucrose and the triggering of the endogenous opioid system (see previous section on rapture in development).

The two-month-olds' rapture is fundamentally different, scaffolded by the adult in face-to-face interactions and spontaneous proto conversations such as peek-a-boo games with high-pitched voices from the social partners who instinctively tends to adopt soothing

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contours (so-called "motherese"), a running commentary in response to the infant's emotional engagement with pupil-to-pupil contact (Rochat, 2006).

We can say that in these first manifestations of shared experience or primary intersubjectivity via face-to-face interaction, infants abandon themselves into the other, and vice-versa, entrained by the flow of the exchange that is ultimately orchestrated by the adult, reassured by the well-being expression of the child, relentlessly striving to cause peek happy or "H" states in their progeny. Thus, at the origins, the quest for rapture is primarily centrifugal, a rapture by projecting outward, a self-abandonment into emotional fusion with the other in joyful face-to-face proto conversations. Although, as we have seen, with the rapid emergence of new behavioral freedom and the insatiable drive of infants to explore their physical environment as well as the new effectivities of their body, it is reasonable to think that in early development centrifugal (outward) rapture is primary, with the more solipsistic centripetal (inward) rapture lagging.

Centripetal rapture may blossom by the time infants reach the threshold of the symbolic gate which opens wide onto the infinite world of solipsistic imagination. Again, this happens since approximately 18 months, marking the emergence of human self-consciousness proper. All of it happens in synergy with syntactic language, as well as the first clear expressions of social emotions like embarrassment, shame, guilt, and pride. As we have seen, it also happens in synergy with first signs of inward soliloquy and pretense, first lies and intentional deception, as well as first signs of the human sense of reputation, i.e., audience effects and image management.

The hidden observer

In rapture and ecstasy, self-abandonment is never absolute, at least in adults. The self as an observer never really vanishes. There is always some recollection of what happened, during the transformation, away from the default survival mode, in spite of reverse agency and experiencing agency loss. Self-consciousness never dissolves completely. Some self-awareness remains at some meta level as if the raptured individual remains a hidden observer of self and situation (Lapassade, 1987). Again, this is evident considering that information is remembered after rapture or dissociative trance, be it a

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hypnotic trance or an LSD trip. What happened is available for retrieval upon return to the default mode, even if the recollection is spotty and partial, not unlike any of our episodic (autonoetic) memories.

Sequences and even the episodic unfolding during an LSD trip, or during a festive, intoxicated event can be recounted, unless falling into ethylic coma with amnesic consequences. In the same way that following induced magnetized trance, hypnotherapists may ask their patients, in addition to how they feel, to recount what happened during the trance.

This phenomenon is a clear demonstration of the importance of considering levels of awareness, from an embodied feeling experience, to hovering meta-awareness and our conceptual sense of self that vanishes only in a deep comatose state or in death. We may say that any post-hoc episodic recollection of a trance state upon return to a default mode of psychic functioning is evidence of life perduring (not total self-discarding), what some meditation techniques aim for, which is an impossible aim. How one can create a void when *being* implies the inverse? The void is a fact of death, not life. While alive, void attainment is just relative, never absolute.

Trance seekers and Zen meditators, even in the case of Masters, are trapped into being. They too eventually die, reaching the absolute void they relentlessly sought while alive. Philosophically and ethically speaking, aiming toward a self-void and living in a void through meditation is a metaphor and a technique that can certainly help guide individuals toward a better life, becoming better people. But it is a metaphor. The self remains a hidden meta observer until death to come (see anecdote at the end of the paper). It is inseparable from being alive. In life, the self as an agent can never be eliminated, except in some temporary states of coma or under anesthesia. Those are, however, analogous to deep sleep states, and not trance-like, wakeful experiences of self-abandonment.

The well-coined "near death experience", does make explicit the fact that such trance-like universal experience is just *near* death, not death itself. In general, trance-like states may be misconstrued as a temporary absolute loss of self. Death, by definition, cannot be experienced which, once again, makes it scandalous. It is only in death that there is a self-void, an absolute dissolution of self. In death, no return ticket - no

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possibility of any retrospection. We can just expect with absolute certainty that it will happen in the future, any day. In the meantime, we are reduced to seeing it happen to others.

Summary and preliminary conclusions

Time flies and my month-long writing invitation at the IEA of Paris is spent. Forced to stop my writing for now, here is a short summary and some preliminary conclusions on our starting question: what might lie behind the human quest for rapture and ecstasy, something we witness across human societies as far back as we may investigate our origins?

As evidenced, I first tried to convey pervasive expressions of human cultivation toward altered states of mind, away from the default mode of functioning in response to daily survival contingencies.

In anticipation of legitimate push backs, I argued that a meaningful account regarding what may drive the human quest for rapture and ecstasy cannot be simply reduced to mere hedonistic mechanisms of reward/pleasure-seeking motives. Such accounts are insufficient because of the distinctive self-conscious and symbolic nature of human psychology, the recursive and creative nature of our mind. Arguably, the human quest and cultivation of rapture and ecstasy cannot be understood outside of the human self-conscious condition. Our mind is a mind that makes us aware of our own, necessary passing - the basic human existential conundrum that is our poisonous gift from nature.

As evidenced, I briefly presented some facts on the ontogenetic emergence of human self-consciousness at around 18 months of age. If signs of rapture and ecstasy are evident from birth, the driving mechanisms and causes behind them change, following universal steps. Children become self-conscious and symbolic by the end of infancy, in parallel to the emergence of language and recursive, "meta" thoughts about the self and the world.

Looking specifically at trance phenomena, I tried to make the argument that the human quest and cultivation of rapture and states of ecstasy, - aside from reverse agency

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seeking away from self-control-, may also be understood as a playful activity to conjure up death and its inevitability.

Accordingly, I came to the realization that all forms of trance, be they hypnotic, drug induced, meditative, or festive, could be construed as self-conscious plays with death. All have in common the deep motive of voyaging toward death, with a return ticket from which one may hope to rake wisdom and improved composure in life.

As a final note, let me recount a personal anecdote with my very old mother who was on her last leg, laying on a stretcher in the hallway of a crowded emergency room. I received a phone call from one of my siblings, who urged me to brace myself because it was the end. Shaken, I asked my sister to put my mother on her cellphone. Mom answered: "My darling son... can you please ask them to stop asking me what year we are in, who is the current president of France and what makes 14 plus 11....". My mother's hidden observer was still alive and well in the midst of her failing body. She just wanted calm ecstasy in her exit from life.

This little anecdote should remind us of the infinite regressions and layers of human self-consciousness. This cannot be overlooked when trying to account for human psychology.

On the whole, this month-long reflection on trance, rapture and what may be behind the human drive toward peek experiences revealed to me, more than ever, that like children, we are players, ultimately exploring the limits of our being by engaging in all sorts of activities, from mountain climbing to jumping off airplanes, getting intoxicated, joining in collective effervescence, and all kinds of trance rituals.

I thus conclude, at this stage of my reflection, that being self-conscious and endowed with a symbolic mind, mortality aware to boot, we are destined by nature to play around the simulation of our own death. I tried to show that it is an important dimension of what lies behind the universal human quest and cultivation of rapture and ecstasy.

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