An interdisciplinary journey into consciousness research

A conversation with Juan González

By Matthieu Koroma

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Abstract

In this conversation, Pr. González and Dr. Koroma discuss the purpose and the challenges of an interdisciplinary study of consciousness. They do so by first tracing back the history of ALIUS, a 15 years-old international association dedicated to the scientific study of the diversity of consciousness. By discussing how we can incorporate views from multiple disciplines, contexts, and methodologies in our understanding of consciousness, they offer insights into the role of science and philosophy. They further address the mystery of consciousness, the place of first-hand subjective experience and empirical data in modelling consciousness, and how we can navigate among multiple definitions of consciousness and related notions associated with it like sentience or the spiritual realm.

keywords: *consciousness*, *interdiscipline*, *multidimensional models*, *psychedelics*, *neurophenomenology*, *experiential knowledge*, *sentience*

Thanks a lot Juan for accepting this conversation together. I would like first to come back to the history of ALIUS. When does it date back to and how did it begin?

First I want to thank you, Matthieu, for this opportunity to express myself, and to ALIUS as well. I would say ALIUS dates back to 2006. At that time, I was having my sabbatical year in Paris and was invited by Jérôme Dokic at the École des Hautes Études en Sciences Sociales (EHESS) to deliver a series of seminars there for the 2005-2006 school year. The seminars delved into the subject of hallucinations, in the context of philosophy and cognitive

science during which I met Alexandre Lehmann, a young and brilliant researcher who attended those seminars and who was very interested in the subject. We had a good chemistry since the beginning and kept in touch. Later on, next year, he introduced me to Guillaume Dumas, another brilliant student, who was also very interested in modified states of consciousness as well as trance induced by music and visuals, just like Alexandre. Alexandre and I organized a very successful workshop in 2007 on hallucinations and other modified states of consciousness and ever since the academic and public interest in those subjects kept on gaining momentum.

And that is how it all started. Then, with Guillaume, the three of us organized in 2008 an interdisciplinary Colloquium. Given its success, we started talking about founding an Association that would allow us to organize and find financial support in the future for the growing events. And so, the Association for the Transdisciplinary Research on Hallucinations and other Modified States of Consciousness (ARTHEMOC) was born as a non-profit organization. Over the years, we got a great response as people from University Paris 5, Institut Jean Nicod (IJN), Ecole Centrale, University Paris 6, the Relais d'Information sur les Sciences de la Cognition (RISC) and other institutions got involved. We started growing and the second Colloquium was held in 2009, with an even bigger success than the previous events.

Then, in 2011, I met Martin Fortier, a remarkable young man of unparalleled genius, who turned out to be a great injection of energy for ARTHEMOC, for he joined its staff with great enthusiasm. However, he had slightly different ideas and outlook on how ARTHEMOC should work and develop. A point in case is that he considered that we were too liberal and too open, because we also included shamans, independent researchers and artists to the events as speakers. Sometimes I think he was right, because when you have a large pool of diverse speakers, you go in different directions and it is hard to find a common ground for all of them and to keep high scientific standards. Yet, Martin wanted to be part of it and he joined the Association, though he pledged to have it more focused and restrained in the future. In 2015, we had our third Colloquium, organized by Guillaume and Martin, an event that started to already reflect Martin's pledge, for the better.

In the meantime, ARTHEMOC became ARTEMOC (without the H), because the idea was not to emphasize hallucinations in particular anymore, but rather the full palette of modified states of consciousness. Then other young and very qualified members invited by Martin and Guillaume joined ARTEMOC and, finally, in 2016, ALIUS was born. Let me explain. On the one hand, Alexandre Lehmann had left for Canada, and I was living in Mexico, so we could not be in France to take care of things locally. On the other hand, there was a push to adopt English as the common language for the Association and to open it to international members. So basically, we let new people take over and bring it up to a different level and direction. We were all happy about it because the bottom line was that modified or alternative states of consciousness were being studied and so with high quality standards. That is when you became part of it, Matthieu, if I am not mistaken. We were very open to letting serious people in with broad interests on the diversity of consciousness. I myself still work mostly on hallucinations. I am very happy to see that yourself and the rest have done a great job by bringing in very professional and capable people; I think ALIUS is thriving.

So do you think that some of the early objectives of ALIUS—for instance, to promote more research dedicated to alternative states of consciousness—have been attained ? Do you think there is still a way to go for the study of these states so that they can be more fully recognized?

It is hard to answer that. I do not live in France anymore and I do not know really how the scene has changed during the 15 years plus since all this started. There was some kind of resistance or caution, back then, to let these subjects be studied in academic settings. My feeling is that things have changed, for the better. In that sense, I feel there is more openness in institutions and researchers, and even in the public at large nowadays, and ALIUS/ARTEMOC/ARTHEMOC must take some credit for that. But I think France is still a rather conservative country, generally speaking, so we should not expect major breakthroughs in this respect.

Fortunately, another good decision was to open ALIUS internationally. You see, ARTHEMOC and ARTEMOC kind of took pride, to some extent, in

being special and present in the French scene, as we tried to do everything in French with some things in English now and then. With ALIUS, and that is also part of Martin's contribution, it was decided that everything was to be done in English. This gave the Association a new push in the right direction, as more people interested in altered states of consciousness were reached out. I think the objectives in that regard have been reached, and rather fast, I would say.

On the other hand, from what I follow in the discussions with the current ALIUS board, some members are favoring more openness. It is a kind of *deja vu* for me because one of the questions at the beginning of ARTHEMOC was whether we should be open to let non-professional researchers and other non-academic people in. In that sense, I do not know if the objectives of ideal plurality have been reached. At any rate, it is very hard to reach a critical mass of committed and highly-qualified researchers in a non-profit organization that studies marginal phenomena and this translates as a very delicate balance to maintain the interest and involvement of people in what we do.

The idea behind ALIUS is indeed to open the study of modified states of consciousness to its diversity not only in terms of content but also in terms of disciplines and methodologies. How is this ambition challenging?

I think what you are talking about concerns cognitive science in general. When I was doing my PhD back in the 90s, it was precisely the same issues we were discussing, especially about interdisciplinarity: what methods, goals, disciplines, subjects, themes should we adopt in order to make a productive coherent whole. 30 years later, I find myself pretty much discussing the same things.

People are still asking how we should work together when studying cognition. Are we supposed to reach like an interdisciplinary platform, a common homogeneous ground, so that disciplines are somehow erased and behind us? Or is it rather like a new set of distinct parts, you know, like a Frankenstein monster that is to be shaped? I have no short answer for those very interesting and actually passionate questions. Both in cognitive science

and consciousness research we have indeed different methods, disciplines, concepts and approaches involved, even within one same discipline we find a huge inner diversity (think of philosophy, psychology or neuroscience), and so in ALIUS we have different approaches to consciousness too.

In my opinion, the main challenge here is what I will call 'research management'. Here in Mexico, as the head of a research center on Cognitive Sciences, I see the beauty but I also endure the challenge of having anthropologists, neuroscientists, linguists, philosophers, and psychologists working together. In our own research center, we strive to work at 3 different levels simultaneously. The first one is the individual level, where everyone does what they please, following their own interests and subject matters. The second level involves the disciplinary area of research. Every researcher belongs to at least one of the five areas of the center. In said areas, we have to talk to each other and interact, which is already a challenge because, like I said, even an area like psychology can be huge, a little universe in itself, and it is the same for neuroscience and so on. In addition, we are expected to publish together and organize monthly seminars within our area. The third level, and the most challenging one, is the interdisciplinary level. To give you an idea, every week students and researchers gather in an amphitheater to see and hear the students' thesis progress. It is a very eclectic crowd, because students and researchers come from very different disciplines. Feed-back from the audience to the students is expected, and spontaneous discussions are welcome.

The goals are clear in this third level, but attaining them is the problem. It is a matter of practicing and believing. It is like dieting or exercising. We know that it is good for us, but we don't always follow through. The real challenge is the practice. We cannot take interdisciplinarity as a given, nor its approaches for granted. It is something that we must build, and we are still working toward that end and cannot just relax and think that everything is done already. Developing interdisciplinarity implies being willing to sacrifice a bit of your own disciplinary identity in order to reach a middle ground, and this is challenging. It has to do with personal adaptability and cognitive plasticity, and with the interest or motivation

you may or may not have to reach for others out there. In this third level the first step forward requires attitude and maintaining the channel open, so to speak, and the conviction that we enrich and enlighten each other from different perspectives on subjects that we all care about. The second step is to develop a conceptual platform and, ideally, a methodological platform too that allows us to understand and cross-pollinate each other. In my experience, I have found that at very small scales. I do not know to what extent we can develop it further in a research institution or at bigger scales.

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> nor its approaches for granted. ”

I think that it is one of the ambitions of Martin and other people of ALIUS to build a multi-dimensional model of the conscious space allowing us to put on the same map different states and models of consciousness (https://www.aliusresearch.org/about.html). The rationale is that our understanding of one state of consciousness can be enriched by comparing it to others and combining different levels of studies and methodologies (e.g., Zamberlan et al., 2018). More recently, Chris Timmerman and colleagues have for example developed a neurophenomonological framework on non-ordinary states of consciousness encompassing neuronal and phenomenological approaches on meditation, hypnosis and psychedelics (Timmermann et al., 2022).

Building multi-dimensional models is still in development and there remains a lot of questions about the dimensions and the kind of multidimensional models that can be built to map conscious states (Bayne et al., 2016). Despite good progress over the past decade in enriching these models (*e.g.*, Sergent et al., 2017), there is still no consensus about the right level on which we should look at these phenomena, how to incorporate phenomenology with neuronal data, and how anthropology can be included in those models. Do you see any limits to such ambition?

Of course, there are all kinds of limits. There are, for instance, top-down institutional limits. We have all experienced a paper being rejected by editors saying that it is not for their journals, or we have seen university departments with people who feel uneasy about their institutional or

disciplinary identity: we need to find a niche for interdisciplinary studies. And there are conceptual, methodological, sociological and psychological limits too. We need to build models and even meta-models on consciousness, but it is a very hard thing to do if they are to please everyone.

Philosophers and philosophy itself have been a federating force in the development of traditional cognitive science and in putting together models of consciousness. However, some researchers are unhappy with this, as they think that philosophers miss out on some important experimental aspects of research, like statistics or the molecular level. Perhaps they are right in saying so, but philosophers would also say that you need to consider other levels or aspects when it comes to studying consciousness, like emerging levels or experiential aspects that you leave out when you try to be reductionistic. So different disciplines or approaches do not necessarily tackle the same epistemological problem. I think we need to be multi-level, multi-dimensional and interdisciplinary, but the problem is the road map to get there. As for me, I gave up trying to think of cognitive science in the singular and I now believe more in a family approach of different aspects. I can say the same about the study of consciousness.

From a Wittgensteinien perspective, I would say that we need to give up our longing for absolute and/or definitive definitions and rather bring in the idea of language-games. Martin Fortier, just as most of us, was not pleased with Arnold Ludwig's famous definition of an "altered" state of consciousness (Ludwig, 1966). Nowadays, I do not think that we have a better definition. We just have alternative definitions. Martin himself was struggling to provide a definition—that I am not happy with just as I am not happy with my own definition either. I think cognitive science and approaches to consciousness resort to different language-games for studying different aspects of cognition and consciousness, respectively.

Jumping back to this idea that we enter language-games, I wanted to discuss about the notion of "state" of consciousness. I have been questioning myself what qualifies as a "state" of consciousness, especially in psychedelic states, where you have such a plasticity and transformation of your experience.

We could frame it in terms of a transformative experience where you learn and transform yourself, and maybe we could gain a better understanding of these states with a more dynamic approach. What makes a "state" ?

Traditionally, a state is something that has a beginning and an end in time. That definition already poses a big problem when it comes to consciousness, because I do not think that you have that when applying it to 'states of consciousness', and even less so when applying it to 'altered states of consciousness'. William James spoke about the stream of consciousness. I like this image because I think of a river in which you may look at different currents or threads and depths. Plus, there is no one single thread, going from the beginning until the very end of the rope, just like there is no tractable set of individual currents that together supposedly make up the river as a whole.

Of course, to make the work with those notions simple, we need basic definitions that are certainly not miraculous but rather just working definitions that help clarify what is at stake. So I think a state can be defined just like that, as a (mental or physical) steady configuration that has a beginning and an end, and then it changes. I like what you say about dynamics and there are modeling approaches to dynamic states or to the dynamic operation of brain activity that can be useful here. Perhaps the state or activity should be conceived more like a gradient, which in turn is recognized to be part of the whole stream or part of a larger set of multilevel states; within such a gradient, we could distinguish benchmarks, because there are peaks and valleys, but also phase transitions. I think these are good ways to visualize psychic organization and the concomitant information, and also useful to understand the psychedelic experience or whatever your experience is about.

How can psychedelics then inform on the neurobiological and sociological constraints that make a conscious state?

A very important part that philosophers, including myself, tend to forget when it comes to cognition is biology. We need to know the most we can about our cognitive system, including the brain and the nervous system, to

build our own theories. I have always thought that phenomenology is constrained and broadly determined by neurobiology. We just cannot think of experience without being embodied and embodiment obliges you to consider the neurobiology of the system, together with its functions, evolution and ecological relations. Then you speak of sociological constraints. Cultural, linguistic, conceptual constraints all come together, like Russian dolls. The fine tuning resides in putting everything in its own place and in the right proportion when it comes to study consciousness and psychedelics: biology, psychology, sociology and philosophy.

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ALIUS has always had the position to stay away from the legal aspects of modified conscious states, for example concerning the use of psychoactive substances or psychiatric conditions. One of ALIUS tenets is that a better depiction of these states of consciousness in society can be achieved by reinforcing the scientific knowledge about the diversity of consciousness. What are the political consequences to you of raising a more informed awareness on the diversity of consciousness? If we talk also about the diversity of cultures in which these modified states of consciousness have been cultivated, could we consider some risks, for example, of cultural appropriation? How can we benefit from cross-cultural talks in the study of consciousness?

There has always been a need, for human beings, to deliberately alter our own consciousness, like most of us have had the experience of being drunk, or riding a roller coaster. It is pretty much an anthropological fact that, at some point, we need to explore and experiment with our own consciousness. Even other animals do change drastically their behavior by intoxicating themselves through plants or other means. I think that kind of need is universal. There are traditions like rituals of initiation that are culturally

inscribed and designed to respond to that need. There is a true cognitive need for pushing limits and answering existential questions that we have always had as humans.

In traditional societies, native people in different parts of the world have recognized those needs and made them part of their lives and healthy development. But I think Western society has very often looked the other way, because of ignorance, cultural bias or fear of deepening the knowledge of our own consciousness. Then add the political aspect, which has lagged behind scientific knowledge on the subject of psychedelics for a long time. However, in the last 5 or 10 years, we have seen some comebacks and breakthroughs regarding psychedelics, mainly because of their clinical application. It is no surprise to see, in our dysfunctional materialistic societies, how mental illnesses such as depression or anxiety have risen in the last decades, with close to pandemic proportions, especially in the young population (https://ourworldindata.org/mental-health). During the Covid pandemic, this has gotten worse (https://www.who.int/news/item/02-03-2022-covid-19-pandemic-triggers-25-increase-in-prevalence-of-anxiety-and-depression-worldwide). There is clearly an urgent need for taking care of our mental health, but our Occidental approaches by default have been rather inadequate, I am afraid. On the one hand, standard medical approaches tend to focus on symptoms rather than on root causes, on the other hand, there are biases and even taboos regarding 'alternative' medicine, such as shamanic healing.

I do not want to idealize or romanticize native people, but I have seen and learnt ways they have to raise children and to overall live in a healthy natural and social environment. For one thing, they form communities and are attached to collective values, for another, they are connected to nature and to the natural cycles of life, all of which have a positive impact on their own physical and mental health and development. In contrast, in Occidental urban environments, it is very hard for young people nowadays to find their place and balance in a individualistic world, where success, money and competition are paramount values, where healthy habits are hard to implement and maintain, where social media, video games, virtual

reality and the meta-verse occupy a good part of their mental space, and so on. In these environments, being healthy in a rich or holistic sense (including the spiritual, psychological, emotional, physical and social dimensions) is very challenging, and I don't think we are doing a good job, overall speaking, in providing our youngsters with the means to develop a healthy and meaningful life.

Rick Doblin, then President of MAPS, told us in the first colloquium of ARTHEMOC in 2008, that clinical aspects of psychedelics are important because they help and validate the scientific research on alternative states of consciousness. I think that is very welcome, but I do not think we have to stop there because psychedelics and research on consciousness go far beyond the mere instrumental and clinical. They are very important to heal psychic disorders, but also, if anyone cares, to know ourselves and find meaning (again) in what we do, in what we are, an aspect that we often lack in modern life nowadays. Together with this, we need a larger epistemological framework that includes other people's cosmological visions, like the native people here in Mexico. Fortunately, we still have a large group of native people that are willing to show us how they live and to teach us their wisdom. This calls for social reconfigurations. I do not know if you would call it a tribal organization, but definitely it is about getting together, trying to inject more sense in what we do just by relating to one another and finding new ways to relate to the environment in meaningful and ethical terms.

Do you think then that more connections between consciousness science and other approaches to conscious experience like artistic or ritualistic can help? What is the place of science in making sense and meaning of our own experience?

Well, it depends on the scientific person we are thinking about. If you are broad minded and you reckon that science does not and cannot encompass our full understanding of reality, then I think that science and scientists can do a great job in building, validating or reinforcing connections to other worldviews. But if you are very limited in your outlook on reality, and either implicitly or explicitly dismiss other people's way of looking at the world,

such as the time-tested wisdom of native people or the view and practice of confirmed artists, then I think you miss out and cannot connect. It must be admitted that artists often bring new concepts and ways to look at the world and these are definitely worthwhile.

The only problem with liberal postures like mine is that, when you let many things in, then you run the risk of making a mess of epistemology; with a larger and pluralistic epistemological framework, you need special caution. We need to put things in their appropriate place, we need to be systematic and methodical. I think it is good that scientists help us to organize our understanding of reality with rigor and discipline. But science itself is not enough. So again, it is about an epistemological balance, neither being too open to let anything in nor too rigid and narrow to leave important things out. I think that that framework is within our reach and the first step consists in educating scientists, making them aware of their own epistemological limits. The second step consists, in my opinion, in bringing experience to the fore, both as a concept and a feature of reality. This is *terra incognita* for most scientists. In any case, there is a lot at stake, and scientists have a big responsibility, for people in general look up to them and heed their advice.

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Do you think that there are some methodological aspects here that are specific to consciousness and phenomenology to discuss, notions like experiential knowledge that is the kind of knowledge gained from our own experience of the reality as we live it? Do you think considering this kind of knowledge is a way for scientists to be more modest in their objective outlook on reality and emphasize more subjective approaches of how people live and make sense of the world?

Like I said, I think there is a great potential gain in the collaboration between science, epistemology and phenomenology. As a personal anecdote, the first time I drank Ayahuasca in Peru, I had a revelation. It was an epiphany, because, among other things, it allowed me for the first time to feel at ease between science and the spiritual realm, between my own experience and objective descriptions of reality. I work in a university and for me that was very relieving: to finally put together, in a coherent, non-exclusive picture, those two important aspects of my life. To be sure, this outlook requires discipline, clarity, and reflection; in addition, I think it is important not to mix language-games. In a university, we have to be scientific and be conceptually clear, organized, and methodical. But we also need to be open to new ways of looking at the world and reality. The problem again is how much is too much or how little is too little: how receptive or how dogmatic you are.

Science has a lot to say about consciousness, but I think that every scientist must also recognize that experience is part of what they are and what they know. When you undergo a psychedelic experience, sometimes your understanding expands, sometimes it is shattered or sometimes it just changes. You could even have a revelation. Philosophers of mind, and I consider myself one of them, should get to know their mind, nuts and bolts. Deliberately modifying it is a great way to know your mind firsthand. And not only philosophers of mind, I think also scientists of mind, should get to experience it in a modified way at least once in their life. Through modification of consciousness things appear in a different light. Of course, it is not an illusion nor a hallucination—that is another typical way to dismiss it. First-hand experience, like Francisco Varela would say, is cognitively paramount and not replaceable by anything.

We have not talked about Shamanism, and I know that in Europe Shamanism is basically lost, or very rare in the traditional sense. However, we could resort to the Shamanic outlook on life to reconnect our own consciousness with a deeper meaning of what being alive means, what being on this Earth, on this universe means, not only in a conceptual way, but in an experiential way too. The credo of the phenomenologists? First-hand

experience. Experience pervades everything and is at the center of everything we think or feel. We need to put experience in its right place.

> “Philosophers of mind, and I consider myself one of them, should get to know their mind, nuts and bolts. Deliberately modifying it is a great way to know your mind firsthand.”

What about the notion of sentience?

Sentience is a concept that has not been talked much about and that came up to me a couple of years ago in a course I taught and a thesis I supervised. It is an important concept because it helps us in deciding whether bullfighting, circuses or abortion is right or not. We make very important decisions based on that concept. So sentience is a good subject of research by which consciousness would seem more tractable. But it is a very difficult concept to deal with. It has to do with the hard problem of consciousness, because I would fancy that sentience is a form of primitive consciousness, a sort of angular stone for consciousness, from an evolutionary perspective. It is also something that carries the minimal sense of consciousness, like when you are in coma and coming back from it. It is about feeling, feeling yourself, feeling alive or feeling cold.

> “Sentience is a form of primitive consciousness, a sort of angular stone for consciousness, from an evolutionary perspective.”

The use of the term in research right now is a bit diverse. There are different conceptions, on the one hand related to the subjective feeling of conscious experience and related to ethical concerns (Almada & Linnell, 2021), and on the other hand, in the context of active inference, related to the ability of a system to interact with its sensory environment, *i.e.*, “the sense of being “responsive to sensory impressions”” (Friston et al., 2020). The implications of using one or the other definition fueled some confusion and debates about the extent to which these conceptions are sound in terms of definition and methodologies (*e.g.*, Kagan et al., 2022).

Until now, I have thus not seen a consensus emerging on the use of the term sentience. It remains open to what extent painful experience in vegetative states or minimally conscious states comes with an ability to be responsive to sensory stimuli. In anesthesia, it remains unknown whether responsiveness to bodily interventions are encoded and stored as a trace in the body or the brain in a way that could qualify as a conscious or unconscious experience. So it is a very interesting concept to discuss how certain aspects of experience and consciousness might be tractable in terms of mechanisms and definitions.

Evan Thompson has a recent paper asking: "could all life be sentient?" (Thompson, 2022). I found that it was a very good article, except that, in the end, in order to make it tractable, he rather defines sentience by hedonic value, like pain or pleasure, or affective valence. I think that sentience goes even deeper, and that there is like a minimal, more compact concept underneath. Before we consider responsiveness to pain or pleasure, or to affective valence (feeling x), we should consider the capacity or possibility to feel *tout court*. Here is where metaphysics joins evolutionary theory, cognitive science and consciousness studies. Sort of Kant meets Darwin and Merleau-Ponty on cognition and consciousness.

There is another case of conceptual confusion that I am curious about. When we talk about theories of consciousness like panpsychism, we can also ask to what extent all life or even matter is conscious (Tononi & Koch, 2015). I am wondering here if there was a confusion between the spiritual, or the immaterial aspects of things, and consciousness *per se*. We can make the case that they are interrelated at some level depending on theories of consciousness. But I am wondering how you would differentiate both, and whether you see a similar case of conceptual confusion arising here?

I had not thought of it, you know. But I can see what you mean, and of course, it is a huge confusion. On the one hand, when you talk about sentience, you need to come back down to the evolutionary origins of life, what were the material conditions for that beginning. Biology can tell us a lot about that. The spiritual or animist part has nothing to do with it. You have to cook it in a different pot. When you are in a shamanistic environment, a ceremony, or in a ritual, you may feel the spirit of Peyote, or

Ayahuasca, or the water, for instance. You are able to sort of communicate with it—in the sense of a spiritual communion with that spirit—and feel yourself possessed by, or connected to, its "personality" or "wisdom" or "greatness" (it is hard to put into words this type of experience. What cannot be said, we should indeed pass over in silence, as Wittgenstein wisely recommends us). But it does not make sense to say that these plants or the water are conscious or wise from a scientific perspective. I think it is possible, and desirable, to keep those two language-games and contexts separate.

There are several other points that you wanted to discuss, ranging from perception to interdisciplinarity, evolution and ecology.

I think discussing perception would take us too far down the road because I am passionate about it and it is a field of expertise for me, especially visual perception. The fascinating point about perception is that it ties experiential issues with conceptual ones, as well as the neurobiological and functional aspects with the cultural aspects of cognition. Perception is a great subject matter for working on cognition and the diversity of consciousness. It also relates to ecological and evolutionary psychology. We need to take ecological and evolutionary aspects seriously to understand our own make-up and our own cognition across time and space in a more relational way. Sometimes, I find accounts of cognition to be too reductionist because they leave one aspect out or the other. Of course, it also ties in with the interdisciplinary method. It is something that we have to keep working on and I celebrate that ALIUS has this spirit because bringing these different aspects together is very challenging.

Do you think interdisciplinarity is especially important for a research topic like consciousness? Would a theory of consciousness, if there is one possible, be expected to emerge from interdisciplinary dynamics? Or should we look maybe for a driving discipline to bring something that would give an entirely new way to look about consciousness?

The problem I see with consciousness is that oftentimes we tend to reify it. We often no longer know whether the problem is real or just a mental

construct. I try to keep a deflationist approach to consciousness in order to keep things manageable. I think scientists and philosophers need to keep things compact and as clear as possible, and be very sober and parsimonious. In that regard, I do not foresee a breakthrough or something like that in the near or far future, because I think that, to a great extent, it is a conceptual rather than an empirical matter.

But there are certainly conceptual and experiential approaches to consciousness that can enrich each other. For instance, empirical study helps to validate or experiential theories of consciousness, whereas conceptual analysis may help clarifying issues and redirecting the empirical efforts of the study. You mentioned the study from Tagliazucchi comparing reports of conscious experience from psychedelics and dreaming experiences (Sanz et al., 2018). They found that more similarity exists between dreaming and psychedelic experience compared to wakeful experience. That makes a lot of sense and lots of empirical research can be done in those directions. But then again, does it inform you on what is a conscious experience to begin with? I do not see a breakthrough in the scientific approach to consciousness telling us something like Eureka, we found the mystery of consciousness.

> “I do not foresee a breakthrough or something like that in the near or far future, because I think that, to a great extent, consciousness is a conceptual rather than an empirical matter.”

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