Webs of Perception

An Outline for a Spider Ontology

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"In nature's infinite book of secrecy, a little I can read."

William Shakespeare

Until recently, any attribution of planning, empathy, self-awareness or creative thinking to non-human animals was considered an anthropocentric projection. A bird that builds a sophisticated nest, a cat that comes to the aid of another one, a monkey that educates her son, a cow that mourns her forced separation from her newborn calf, all were considered to express instinctive behaviors, and not, God forbid, emotional or intellectual complexity. Indeed, we have all accepted Darwin's teaching that Homo sapiens is a creature like all others, not a special creation made in the image of God, but nevertheless, the prevailing attitude was, and still is, that

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consciousness has developed relatively recently and exclusively in Homo sapiens. It is most likely lacking in other creatures. After all, it is not possible that without a language or a car, without divine commandments and without ideologies, lizards, dogs and octopuses, are to be found on the same level with humans, in the hierarchical scale of evolutionary development. Hierarchy, which originates, for the most part, in the body-soul dualism and in monotheistic moral teachings.

Belatedly, in recent years, science has begun to show a significant interest in the behavior of non-human beings - from fungi and plants to animals - and dare to imagine that these are also capable of certain forms of experience, communication, problem solving, thought and perhaps even creativity. The reductionist perspective of modern science, which tends to analyze everything in terms of decomposition and mechanisms, is slowly being replaced by an openness to the possibility that subjective experience is not the exclusive property of Homo sapiens, and that non-human beings may show signs of learning, memory and consciousness.[2] At the same time, the field of philosophical discourse also became more engaged in the development of new perspectives on reality, which seek to shift the attention from the human point of view, and examine the world through perspectives that are less anthropocentric. In light of the ecological crisis that reached its peak in recent years and began to occupy an important place in public discourse, works such as the *Object Oriented Ontology*,[3] *Panpsychism*,[4] and concepts like 'More-than-Human-World',[5] and 'New Animism',[6] gained momentum and an honorable place in contemporary thought, and they fill the bookshelves in the relevant fields.

The following text seeks to ride the wave, to join this accumulated body of work, and to also gather, albeit modestly, under the rather desperate attempt to save the world through a paradigmatic change of human thought. Admittedly: this is an anthropocentric text. It was written from a human perspective, with and from the Kantian understanding that the writer has no possibility of escaping from such a point of view. Despite the sincere attempt to do the impossible, this is a completely "projectional" text. The writer, the son of two bipedal parents,

[2] For example, on communication and possible consciousness in plants, see works by Suzanne Simard, Monica Gagliano and others.

[3] Harman, G. (2018). *Object-oriented ontology: A new theory of everything*. Penguin UK.

[4] Goff, P. (2017). Panpsychism. *The Blackwell Companion to Consciousness*. pp. 106-124.

[5] de La Bellacasa, M. P. (2017). *Matters of care: Speculative ethics in more than human worlds*. U. of Minnesota Press.

[6] Harvey, G. (2014). *The handbook of contemporary animism*. Routledge.

took upon himself a mission lost in advance. However, it should be noted that the anticipated failure of this task holds spectacular potential: because the overriding motivation of the article, necessarily anthropocentric, is to subvert the anthropocentric thought itself. The article presents a thought exercise that involves achieving an impossible thing: the way in which animals that are fundamentally different from us perceive existence.

Quite a few works that aim to remind humans that they are also animals have been done already.[7] Attempts to understand how other animals think have also touched here and there on the problem of consciousness and the understanding that the mind of non-human is completely obscured to us.[8] Many thinkers who inspired the writing of this article and who already have a considerable number of achievements under their belt, also eventually encounter the transparent wall of the edge of possible.[9] Therefore, the current list presents a desperate, perhaps ridiculous, attempt to present an outline for an animal ontology (of a certain kind), where the underlying goal is threefold: (1) to find inspiration in a world view (admittedly speculative) that is not human, in order to change our anthropocentric point of view on existence and to open us up to other perspectives.[10] (2) to introduce and encourage empathy for a creature that tend to arouse repulsion and disgust in many of us, and which for most people is perceived as an alien being. Such an approach, of getting to know and identifying with non-human beings who share this small piece of the universe with us, may lead to a more tolerant and cooperative world, and most importantly - sustainable. (3) To promote the understanding that humans share the world with entities that have a completely different perception and experience of reality, which we will probably never be able to truly get to know. As equal cohabitants on this planet, we must understand and accept that the world is filled with an infinite number of viewpoints, many of which are completely foreign to one another, and that none of them is more important than the other.

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[7] See for example Challenger, M. (2021). *How to be Animal: A New History of what it Means to be Human*. Penguin. Also: Abram, D. (2010). *Becoming an animal – An Earthly Cosmology*. Vintage Books.

[8] Nagel, T. (1974). The Philosophical Review. *What is it Like to Be a Bat*, pp. 435-450.

[9] In the background of the present work, a place of honor is reserved for many thinkers who were not mentioned throughout the article, including Baruch Spinoza, Friedrich Nietzsche, Edmund Husserl, Georges Bataille, Julia Kristeva, Donna Haraway, and many, many others.

[10] See a work that goes in this direction, but with a slightly different methodology: Marder, M. (2013). *Plant-thinking: A philosophy of vegetal life*. Columbia University Press.

Spiders

Spiders have aroused the curiosity, as well as the fears, of humankind since time immemorial. Various mythologies around the world are intertwined with stories about spiders and characters influenced by this multi-legged animal, some of which were even attributed divine qualities; The weaver goddess, Uttu, from Mesopotamian mythology;[11] Arachne, the Greek weaver, who challenged the goddess Athena, who as punishment turned her into a spider;[12] Anansi, the trickster god from Africa, god of stories, wisdom and knowledge;[13] Iktomi, The trickster spider from the folklore of the Lakota people;[14] Nareau the creator spider from the Gilbert Islands in the Pacific Ocean,[15] and more.

With eight eyes and eight legs, with their silk-spinning abilities and their special (and sometimes deadly) mating rituals, spiders represent a very different being than ours. Their presence in our lives has an intrusive quality - for most of us they are usually unwanted, and the fact that they share residence with us without being invited, does not help them to be liked by us at all. Despite their closeness—most likely, everyone reading this text is only a few centimetres away from a spider without knowing it—they remain very, very distant from us. In light of their biological and behavioral characteristics, their perception of reality - if it can be considered as such - will likely be completely different from the human one.

The central nervous system of a spider is located in its cephalothorax (unlike in insects, the spider's head and thorax are combined), and it consists of a relatively large mass of nervous tissue.[16] This mass, often referred to as the spider's "brain", extends down into the legs and also controls its internal organs. Spiders also have several clusters of nerve cells ('ganglia'), which control local body functions and movements. For example, there are ganglia in the spider's legs, and they control the movement of the legs. These clusters can operate somewhat independently, allowing the spider to respond quickly to touch or vibration stimuli without the

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[11] Shifra, S., & Klein, J. (1996). *In those distant days: Anthology of Mesopotamian literature in Hebrew*. Tel Aviv: Am Oved Publishers Ltd. pp. 55-70.

[12] Gregory, H. (1958). *OVID the Metamorphoses – A Complete New Version*. The Viking Press, New York. pp. 147-151.

[13] Abrahams, R. (1983). *African folktales*. Pantheon.

[14] Jones Jr, S. S. (1978). *Tales My Grandfather Told Me: A Collection of Santee Sioux Tales*. California State University, Fullerton. pp. 45-59.

[15] Cotterell A. (1989). *The Illustrated Encyclopedia of Myths & Legends*. Collins Australia.

[16] Hill, D. E. (1975). Hill, D. (1975). *The structure of the central nervous system of jumping spiders of the genus Phidippus (Araneae:Salticidae).* Oregon State University; Babu, K. S., & Barth, F. G. (1984). Neuroanatomy of the central nervous system of the wandering spider, Cupiennius salei (Arachnida, Araneida). *Zoomorphology*, *104*, pp. 344-359.

need for a brain to process the information. The spider's brain is responsible for processing sensory information, controlling behavior and coordinating its responses to the environment. For example, the spider uses its brain to process the vibrations and chemical signals that help it perceive its surroundings. The size of the brain in relation to the size of the spider's body is proportionally larger than that of many other arthropods. This fact indicates that spiders may be capable of relatively complex behaviors, and probably have some form of learning and problem-solving capabilities. Research has already documented examples of certain species that can plan hunting strategies in advance, learn from mistakes, and distinguish between varying quantities of potential prey.[17]

Delving into the complex and unique characteristics and nature of the spider, the following article attempts to weave a speculative web of ideas about what a spider ontology might look like, if it existed. As mentioned, this is only a thought experiment, and inevitably involves an anthropocentric view. The idea is to examine new forms of human epistemology, through an assumed philosophy of a creature that is radically different from us. Spider ontology, however speculative, may push us to question our philosophical assumptions, and challenge us to think beyond the anthropocentric point of view. The potential world of the spider—a world of vibrational languages, cyclical time, and deep solitude—might serve as a unique mirror for us to examine the limitations of our own perception and potentially expand human ontology. The arachnid reality as will be revealed to the reader in the outline given here, may be one in which physicality and immediacy dominate; in which the boundary between the self and the world is blurred by the silky web that operates as a kind of extension of the body; in which existence is one of loneliness; in which the Other represents only competition, prey, danger or potential sex.

The article was inspired by the familiar form of the web of the orb spiders. This iconic, wheel-like web includes a central point from which main threads emerge. These threads are connected to each other by secondary threads, forming a spiral pattern. Thus, the article is built from a series of some main "threads" stretched from the starting point, which are based on the well-known properties of the spider;[18] some kind of sub-threads are stretched between them,

[17] Cross, F.R. & Jackson, R.R. (2017). Representation of different exact numbers of prey by a spider-eating predator. In: *Interface Focus.***7**20160035. 20160035. http://doi.org/10.1098/rsfs.2016.0035; Jackson, R.R. & Pollard, S.D. (1996). Predatory Behavior of Jumping Spiders. In: *Annual Review of Entomology*. Vol. 41: 287-308.

[18] Not all arachnids share identical traits. Arachnids are a vast group of creatures, encompassing numerous types and species, some of which have drastically different characteristics. For instance, some spiders hunt by patiently

breaking up the main theme to its special characteristics, and also connect it to the other sections of the whole system. The main "threads" in the outline below, which are based on the features identified with arachnids include sensory and physical perception, web-based perception, predator/prey existentiality, the perception of cyclical time, regeneration, individuality and the instinctive action. These features are related to each other, derive from each other and maintain relations of affinity which are reflected in the sub-features that are reviewed next to each of them, as part of the speculative experiment to delineate the ontology of spiders.

Ontology of the Physical World

In his work "Phenomenology of Perception" (1945) Maurice Merleau-Ponty emphasized the fact that our body and its specific characteristics have a central role in shaping our perception of reality; The body is not a passive entity, but an active participant that shapes our experience in the world and the perceptions derived from it. For Merleau-Ponty, the body and the world are inextricably intertwined, in a dynamic and continuous process. He rejects the traditional dualistic distinction between mind and body, advocating instead corporal subjectivity. It's not that we *have* bodies, we *are* our bodies, and through bodily existence, we throw ourselves into situations, interact with others, and shape our understanding of reality.[19] The spider's body is very different from the human body, and therefore it is instructive to think about how its physical properties might affect the spider's perception. Inspired by Merleau-Ponty's work, the following lines consider the physical characteristics of arachnids and how these might affect their perception of reality.

Multiple limbs: The fact that it has eight legs may profoundly shape the spider's worldview. Where humans think in terms of binary contrast (left/right, up/down, front/back), spiders may conceptualize the world more radially or multidirectional, given their eight points of contact and movement. While the bipedal human maintains a vertical relationship to reality, in which their body stretches from the bottom up, arachnids may have a more horizontal and peripheral perception. Considering James J. Gibson's idea of "affordances", which suggests that

lying in wait on their webs, while others actively hunt without the use of a web. The points discussed in this text relate to features common to most arachnids, but the content is intended to be inclusive. It should be noted that there may be specific species that do not exhibit all the characteristics described herein.

[19] Merleau-Ponty, M., & Smith, C. (1962). *Phenomenology of perception* (Vol. 26). London: Routledge.

organisms perceive their environment in terms of action potentials (I see the function of a chair before I notice its other components),[20] the spiders' multiple points of contact may give them a more complex perception of movement and balance and may offer them a richer understanding of action and interaction than human perception allows.

Multiple eyes: Spiders usually have eight eyes, although not all of them function in a similar way to human eyes. Some of their eyes generate vision similar to ours, even to the point of creating images, while others specialize in distinguishing various degrees of movement and lighting.[21] This fact surely affects the way spiders perceive reality. They may not have the same visual acuity as humans, but their perception of the world may involve a more fragmented, multifaceted 'vision'. The fact that spiders use different sets of eyes for various tasks, such as light, motion, or shape detection, could inspire interesting ontological concepts about the nature of perception and reality. They might have distinguished philosophically between different types of 'seeing', assigning different ontological statuses to each.

Exoskeleton: Spiders, like other arthropods, have an exoskeleton that provides them with both structure and protection. Their "self" is entirely contained, in a sense, within a rigid shell. This is different from the skin covering that humans have, which is more diffuse and permeable.[22] This can lead to a fundamentally different perception of the body and the self compared to humans, with their skin, vulnerable flesh and internal skeleton. Spiders may perceive their bodies as an impenetrable fortress or as one solid entity, which can lead to very different ideas about selfhood, protection, vulnerability, and change. If spiders are indeed capable of a complex self-perception, it is doubtful whether the Cartesian dualism body-mind is a significant component of it.

Shedding: While the arachnids' exoskeleton may contribute to a solid and monistic sense of identity, their habit of shedding the outer covering of their bodies during each growth stage could lead to a different understanding of 'self'. They may see it as something fluid, changing,

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[20] Gibson, J. J. (1977). The theory of affordances. *Hilldale, USA*, *1*(2), pp. 67-82.

[21] Primarily, jumping spiders possess acute vision, more akin to humans, which is necessary for their active hunting lifestyle. Conversely, spiders that reside on webs and utilize them to ensnare their prey largely depend on their sense of touch and detection of vibrations. See Harland, D. P., Li, D., & Jackson, R. R. (2012). How jumping spiders see the world. In O. F. Lazareva, T. Shimizu, & E. A. Wasserman (Eds.), *How animals see the world: Comparative behavior, biology, and evolution of vision*. pp. 133–163. Oxford University Press; Jackson, R.R. & Pollard, S.D. (1996). Predatory Behavior of Jumping Spiders. In: *Annual Review of Entomology*. Vol. 41: 287-308.

[22] For a discussion of the human skin, see Anzieu, D., & Turner, C. T. (1989). *The Skin Ego*. Yale University Press.

and non-static. They will perceive identity as something that can be shed and renewed, just like their outer covering. Thoughts about growth, change and reincarnations may certainly occupy an important place in such a lifestyle; The act of shedding may be perceived as a profound personal transformation—a sort of rebirth or regeneration—replacing the old 'self' with a new one.

Venom and silk production: Spiders also have unique physiological properties such as venom and silk production. The spider philosophy may regard these as integral aspects of existence. Venom, a tool for hunting and protection, might symbolize power, danger, or transformation, while silk—used for construction, capture, and sometimes even reproduction—might symbolize creativity, vitality, and cohesion.[23] The fact that the spider produces these substances within its body, and in fact does not require external assistance to maintain these "superpowers", certainly may affect the perception of reality and the relationship that exists between the spider-subject and the technology it uses.

Sensory Perceptions

Spiders rely primarily on vibration signals, chemical cues, and physical contact. Therefore, their ontological understanding of 'reality' may be quite different from that of us humans. For example, their conceptualization of 'distance' or 'space' can be quite different, based more on vibrations or chemical signals than on visual perception. It is therefore possible that ideas of 'here' and 'there' do not exist for the spider in the same way that they do for us.

Tactile perception: Spiders have a keen sense of touch, enhanced by the sensitive hairs and spines on their legs. These allow them to sense air currents, vibrations and physical contact. From a philosophical point of view, spiders may regard 'reality' as something mostly tangible and direct. This can be expressed in an ontological focus on direct experience and physical interaction. In the world of spiders, what cannot be touched may be considered non-existent, or at the very least something of a lesser reality.

Vibrational Perception: Spiders rely heavily on vibrations for hunting and communication. They interpret the world in a meaningful way through vibrations that run upon their web. As a result, a spider's ontology may include complex concepts about the 'invisible' forces of the

[23] In this context it is interesting to think about Heidegger's "thrownness into existence." See Heidegger, M. (2010). *Being and time*. Suny Press.

world, represented by the vibrations they can sense but not see. The world can be perceived as a network of interconnected vibrations, with each being and object contributing to the harmony or dissonance of the whole. Studies indicate that spiders engage in complex decision-making processes, which include the use of vibrations for communication. This technique is often employed in situations like courtship and the selection of potential mates.[24]

Chemical perception: Spiders use chemical signals for various purposes, such as finding mates or identifying prey. This feature, of course, may give rise to a worldview that emphasizes connections and invisible 'signals' in the environment. Spiders may perceive 'reality' as a kind of tapestry of chemical pathways, which could potentially spark philosophical debates about the nature of these invisible, yet crucial, connections.

Spatial perception: Unlike humans, and with the exception of a limited number of species, arachnids do not rely heavily on vision to understand spatial relationships. They may conceptualize 'space' and 'distance' based on other sensory information such as vibrations or chemical signals. Concepts of 'near' and 'far' might be perceived differently than in humans, perhaps not as a visual 'gap,' but rather as a difference in signal strength or as a time delay in vibration.

Web Ontology

For most spiders, as we all know, the web is a very significant and essential element, in their lives and their survival potential. It is a hunting tool, a shelter, a device for attracting mates and more. The web embodies an extension of the spider's senses, and in fact an extension of its body.[25] This feature may blur the distinction between the 'self' and the 'environment', suggesting that objects created by an individual can become an integral part of their 'self'. Interesting philosophical discussions might be about the nature of the web, its relation to the spider, and the question of whether the destruction of the web means the loss of the self. As we examine how the silk web might impact the ontology of spiders, it is interesting to reflect on Andy Clark and David Chalmers' concept of the 'extended mind'. Their idea posits that the mind and cognitive processing aren't confined strictly within the boundaries of the individual,

[24] Uetz, G.W. et al. (2017). Complex signals and comparative mate assessment in wolf spiders: results from multimodal playback studies. In: *Animal Behaviour*. Volume 134. pp. 283-299.
[25] Japyassu, H.F. & Laland, K.N. (2017). Extended spider cognition. In: *Animal Cognition*. Vol. 20. pp. 375-395.

but can extend into the individual's environment. They argue that when tools or technologies become integral to a person's cognitive processes, such as memory storage or problem solving, these tools effectively become extensions of the person's mind. Thus, Clark and Chalmers suggest that the environment plays an active role in driving cognitive processes, as opposed to the traditional view of cognition as a process that only occurs within the brain.[26]

The self and the outside: the web may blur the line between the spider's 'self' and the outside world. As an extension of one's body, the web may be considered part of the 'self', which would lead to an ontology in which being extends beyond the physical body. This raises interesting questions about where the 'self' ends and the 'other' begins. These are questions familiar to us from human thought, which also deals with the limits of the self and its extensions (for example, to what extent a person's home serves as an extension of his self),[27] but spider ontology may lead to the development and emergence of completely new concepts and questions.

Creation and destruction: Spiders create and destroy their webs regularly. This feature evokes thoughts of creation, destruction and rebirth. The process of weaving the web might represent an act of self-creation or self-expansion. Destruction of a web, whether by a predator, prey, or the spider itself, may be seen as a form of self-destruction or transformation. The rebuilding of the web could be viewed as a form of rebirth or renewal, analogous to human processes of revival and initiation.

Reciprocity and dependence: The spider's web, symbolizing a complex network of connections, evokes concepts of reciprocity and dependence. Each thread in the network relies on the other threads for its stability. From this point of view, every event or entity in the universe may be seen as interconnected, with the existence and actions of one affecting the others. The shape, function, and structure of the web recall the model posited by structuralist thought, in which language is represented as a web of signs, each depending on its neighbouring signs.[28] It is interesting to think about language from the spider angle, not only as a network of signs that influence and depend on each other, but also as a technology that allows us to have a real effect on reality that does not involve any direct contact of the body.

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[26] For more see Clark, A., & Chalmers, D. (1998). The extended mind. *analysis*, 58(1), pp. 7-19

[27] Regarding the house as an extension of the self, see Bachelard, G. (2014). *The poetics of space*. Penguin.

[28] The idea that language is constructed as a web of signifiers first appeared in the work of Ferdinand de Saussure, but was expanded through Derrida's concept of "difference". See Derrida, J. (2001). *Writing and difference.* Routledge.

Perception and reality: As previously described, the web serves as a sensory organ for the spider, capturing vibrations from the environment. This can lead to an ontology that emphasizes the perception of vibration as the basis of reality. The 'real' can be defined as what is perceived through the threads that transmit the waves of vibration to the spider's body, while the 'unreal' or the 'unknown' may represent what exists outside of this perception.

Orientation: Many species of spiders inhabit the upper side of their webs, positioning their bodies upside down in relation to humans. For these species, our 'up' is their 'down', and vice versa. Such a perspective (which may even have physiological consequences) may have a profound effect on the spiders' understanding of space and reality, and even on their perception of identity, assuming such a thing actually exists.

Gravitation: The ability to spontaneously create a thread, effectively pulling a life-saving rope from their bodies when necessary, could significantly influence spiders' perception of gravity and balance, rendering falls and associated injuries almost non-existent. Along with the change of orientation involved in living upside down and with the famous ability to walk upon walls and ceilings, the spider hardly has to deal with issues of maintaining balance, height differences, and the like. This certainly affects the spider's perception of space, which will be fundamentally different from ours, which is characterized by clear directions and boundaries; We all know what is below and what is above, and our lives are conducted in a very specific direction, which is much more vertical than that of the arachnids.

Trap and freedom: The web serves both as a home and a hunting tool for the spider, signifying safety for the spider but danger for the prey, or for a spider caught in another's web. This can of course lead to philosophical concepts about the dual nature of existence: freedom and captivity, life and death, safety and danger.

The thought of a spider web ontology brings to mind Deleuze and Guattari's concept of the 'rhizome'.[29] The spider's web, in its complex network of connections, can be seen as a physical embodiment of the rhizome. Each thread in the web is connected to others, without one being inherently more important or central than the other threads. The rhizome grows by "shooting" in all directions, creating a network of interconnected nodes without a designated center. Applying this concept to the spider ontology can lead to an understanding of the world as fundamentally connected, and as non-hierarchical. Just as there is no single 'center' or 'head'

[29] Deleuze, G., & Guattari, F. (2004). *EPZ thousand plateaus*. A&C Black.

of the rhizomatic network,[30] there may be no clear ‘center’ or ‘head’ of the universe. Every creature, object and event can be seen as interconnected nodes within a vast and complex web of existence. The rhizomatic concept also aligns with the creation and destruction of the web. Deleuze and Guattari argue that the rhizome can break or tear at any point, yet it will begin to grow again along a new line. In the same way, a spider can lose or destroy its web, only to build and re-establish its connection to the world.

Predator-Prey Ontology

Spiders are carnivores, and their lives revolve around the cycle of hunting and eating. Therefore, it is likely that their philosophy will center around the roles of ‘hunter’ and ‘prey’, and perhaps relate a deeper meaning or purpose to these roles. Ideas of life, death and existence may be framed in this context. For example, the concept of ‘existence’ may be identified with the continuous process of hunting and eating, while the concept of ‘death’ is usually associated with the spider itself becoming prey.

Existence through hunting: As predators, the survival and existence of arachnids revolves around hunting. Therefore, they might associate ‘life’ or ‘existence’ with a successful hunt. The act of hunting might be considered as the most essential and ‘real’ part of existence, a key activity that defines the being of the spiders. The technology used by the spider in hunting - the silk, the venom and the enzymes used to melt down the prey’s insides - is produced in its body and is an integral part of it, which significantly affects the "being in the world" of the spider, unlike other animals whose bodies do not have these sophisticated functions.[31]

Power Dynamics: The predator-prey dynamic can lead to ideas about power and dominance. The spider ontology may include a hierarchy of creatures, based on their roles as predators or prey. ‘Power’ or ‘superiority’ can be defined in terms of an individual’s ability to hunt and avoid becoming prey themselves. In the arachnid reality, any foreign creature, any ‘other’, might be seen as potential prey or potential predator.

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[30] It is worth noting, though, that in some species of spiders, the web has a clear center, on which the spider waits for its prey, while the trap spread around it allows it peripheral sensing.

[31] See Heidegger, M. (1977). The question concerning technology. In W. Lovitt (Trans.), *The question concerning technology and other essays*. pp. 3-35. Harper & Row.

Life and Death: The predator-prey relationship might play a fundamental role in the spiders' understanding of the life and death cycle. 'Life' can be regarded as a state of being a predator, of being able to hunt and kill, while 'death' may signify becoming a prey - to be hunted and killed. The transition from life to death can be seen not only as a biological process, but as a change in the individual's status from *hunter* to *hunted*.

Dualism of fear and desire: As hunters, spiders might perceive reality through a lens that sees the world in terms of anxiety and desire—fear of becoming prey and the striving to make prey of the other. These two forces can be seen as the basic motives of life, with the spider perspective exaggerating them through reduction, which brings to mind the Freudian model of the mind, and Freud's use of the terms 'Eros' and 'Thanatos'.[32]

The cycles of nature: the predator-prey dynamic may give rise to a cyclical view of nature. The act of predation is part of the natural cycle of life, death and rebirth. A spider may see the world as a continuous cycle of being the hunter and being the hunted, with each creature playing its role in maintaining the existential balance.

A relationship of intimacy with food: in every act of hunting and capturing prey, a certain level of intimacy between the predator and prey is also embodied.[33] Most species of spiders do not eat their prey whole, but secrete enzymes that dissolve the internal tissues of it, allowing the spider to pump them into its digestive system, which is only capable of digesting liquid food. The process of dissolving the tissues and "drinking" the prey may take a very long time, so the spider finds itself in a long "recreation" that involves a slow transfer of life energy from one body to another. The relationship created between the spider and its prey, the intimacy embodied in it, and the special way of consuming the food, may greatly influence the spider's relation to any potential prey, and the dialogic relationship between the spider and the food it consumes. Eating is not a trivial matter - it is an act of continuous communion and has a ritual quality, in which the food "gives itself" no less than the feeder takes.

While entirely speculative, these points illustrate how the predator-prey dynamic, a fundamental aspect of the spider's existence, might profoundly influence its ontology. The potential spider philosophy, embodied in constant hunting, power "plays" and the cycle of life

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[32] Freud, S. (2015). Beyond the pleasure principle. *Psychoanalysis and History*, *17*(2), pp. 151-204.

[33] Anthropologist Nastassia Martin, who was attacked by a bear that destroyed her jaw, described the incident as an act "more intimate than anything I could have imagined." See in: Jamison, L. (2022). The Bear's Kiss - What do we learn when the boundaries between humans and animals collapse?. *The New York Review*, October 20, 2022 issue.

and death, brings to mind the human struggles of power and survival. Humans are no longer a common potential prey for other animals, and in fact have long been eliminated from the food chain of the animal world, but it would be foolish to deny the predator-prey qualities that are nevertheless embodied in human reality, which is saturated with wars and conflicts.

Cyclic Time Ontology

Spiders may perceive time as a series of repeated events (day-night, seasons, mating times, etc.), rather than as a linear progression. The concept of ‘future’ may be very different from that of humans, to the point of non-existence, especially in the case where there is a lack of awareness of the expected end of life. We should note, however, that we don’t actually know this about spiders. Such a view, however, may lead to an ontology that emphasizes repetition, recurrence and circularity, over linearity and one-way action.

Seasonality and Life Cycles: Spiders, like many non-human animals, experience the world in terms of cycles such as day-night, seasonal changes, and different stages of life cycles. Their philosophical concept of ‘time’ may not include a future radically different from the present or the past, as humans often imagine. Instead, ‘time’ can be seen as a series of repeating patterns and cycles.

Existence and recurrence: In this cyclical worldview, the idea of existence could also be seen as cyclical. Rather than seeing life as a linear journey from birth to death, spiders may see life as a cycle of repeating stages: birth, growth, reproduction, death and then rebirth (through offspring); There are species of spiders in which matriphagy has been observed - a phenomenon in which the mother sacrifices herself and allows her offspring to feed on her body, thereby providing them with the first significant meal of their lives, and thus increasing their chances of survival.

Action and effect: A cyclical concept of time can lead to a different understanding of cause and effect. Instead of seeing actions and their consequences as linear processes, arachnids may see them as part of a cycle of actions and reactions, which repeat themselves over time.

Change and stability: in a cyclical worldview, change and stability are not opposed to each other, but are part of the same process. The changing seasons or stages of life are predictable and stable in their recurrence. Therefore, ‘change’ could be seen as not a deviation from the norm, but as an expected and predictable part of the cycle of life.

Past and Future: With such an understanding of time, the distinction between past and future may become less significant. One can see the 'future' as just another cycle that reflects the past and the present; To see the 'past' not as something that existed and disappeared, but as something that will come back again and again.

Waiting: Many species of spiders wait motionless for hours or even days for prey to be caught in their web. This feature evokes thoughts of patience and restraint, inner peace, and the feeling of time passing. The spiders may see 'action' not as a constant movement, but as an ability to wait with endless patience for the right moment. Through such a perspective, 'time' can be seen not as something to be filled with activity, but as a platform for patient observation and anticipation.

The idea of cyclical time, as opposed to linear time, finds an interesting echo in Mircea Eliade's idea of the 'eternal repetition'.[34] Eliade discussed how archaic man evades the linear progression of history, which is often described as shooting like an arrow from the past to the future. He claims that every ritual constitutes a repetition and memorization of a myth, thus creating a circular pattern of time that takes the practitioner of the ritual outside the meaningless race of history. While the spider's 'participation' in the immediate reality is certainly not equivalent to staying in a ritual process, it does to a large extent reside where the human ritual marks as one of its goals - a connection to the cyclical time, participation in the natural world, and creating an affinity to the 'being in the world'.[35]

Ontology of Regeneration

Spiders have an extraordinary ability to regenerate lost body parts (regeneration), or lose them intentionally (autotomy).[36] This ability allows them to survive encounters that would be fatal for many other creatures, such as predator attacks or territorial disputes. When injured, spiders can shed their limbs and subsequently regrow them, thereby restoring their body integrity. Such regenerative capacity may, of course, affect the spider ontology.

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[34] Eliade, M. (1954). *The myth of the eternal return: Cosmos and history*. (W. R. Trask, Trans.). Bollingen Foundation.

[35] Heidegger, M. (2010). *Being and time*. Suny Press.

[36] Eisner, T., & Camazine, S. (1983). Spider leg autotomy induced by prey venom injection: an adaptive response to "pain"?. *Proceedings of the National Academy of Sciences*, 80(11), pp. 3382-3385.

Embodiment and regeneration: In their constant potential for physical regeneration, spiders can hold a different conception of their bodies than humans. Unlike the latter, who perceive their bodies as relatively stable entities that change mostly in one direction, spiders may perceive their physicality as fluid and constantly renewing itself. The physical self may be perceived as transitory and changeable. The process of losing a limb and renewing it may not be perceived as a crisis, but as a natural cycle of loss and regeneration.

Damage Perception and Healing: The arachnids' ability to regenerate may also shape their damage perception and healing. Where we humans often see injuries as significant disruptions to our normal state of being, spiders can see injuries as part of the normal cycle of existence. This perspective could shape an understanding in which healing is not an extraordinary act, but a normal aspect of existence.

Survival and sacrifice: the act of autotomy - cutting off a limb to escape a predator or to survive an injury - is an act of deliberate sacrifice for the good of the entire organism. Within the spider's understanding of existence, concepts of sacrifice and survival may be closely intertwined. Survival may be perceived not only as a state of being passive, but as an active process that involves personal sacrifice.

Self-continuity: The ability of spiders to regenerate lost limbs also raises interesting questions about the continuity of the self. If a spider loses a leg and then grows it back, is the new leg 'the same' as the old one? Is the spider the 'same' spider as before? This brings to mind the 'Ship of Theseus' paradox, introduced by Plutarch, that challenges our traditional understanding of identity and change.[37]

Resilience and adaptability: the ability to regenerate expresses the significant resilience and adaptability of arachnids. These features may lead to an ontological focus on resilience and

[37] The 'Ship of Theseus' Paradox: The vessel once sailed by Theseus has been kept in Athens as a historical relic for centuries. Over the passage of time, the wooden components of the ship began to decay, prompting their replacement with new, identical elements. Eventually, this process led to the replacement of every original part of the ship. This paradox poses a challenging question: Does the refurbished ship still retain its identity as the original ship of Theseus? If not, when exactly did it transform into a different entity? If it does remain the same ship, how can this be, considering none of the original components are present? Further complexity is added to the paradox with the proposition of gathering the discarded components to build a second ship. Which then, is the real ship of Theseus - the one constructed from all the original parts, or the one that endured and maintained its form through the substitution of its components? The Ship of Theseus Paradox evokes profound philosophical inquiries about the essence of identity and the continuity of existence over time. It's utilized across various philosophical domains, including metaphysics, philosophy of mind, and even in debates around personal identity and the continuity of consciousness. This paradox compels us to reconsider our understanding of what constitutes an object or person's sameness over time, despite the alterations in its parts or attributes.

transformation as fundamental aspects of existence. Adapting to the environment and overcoming adversity are inherent qualities of the arachnid lifestyle.

The fascinating biological capacity of regeneration in spiders provides a rich bed of metaphors and insights, challenging our notions of embodiment, identity, survival and resilience. Through understanding the spider's perspective, we may learn to embrace change, adaptation, and constant renewal as essential dimensions of our own existence.

Ontology of Solitude

Spiders are mostly solitary creatures. Therefore, their understanding of the concept of 'others' may be fundamentally different from that of humans. Their ontology may include an individuality that is deeply rooted in their being. Concepts of sharing, cooperation or empathy may be completely absent or radically different from our own. 'Otherness' may be understood solely in the context of threat or mating (the two may also be intertwined, as for example in cases where the female preys on the male after fertilization), and not in more complex social relations. Despite the meshed perception of reality, where seemingly everything may affect many other things, the solitude built into the biological nature of spiders, makes them almost completely autonomous creatures, from the social point of view. It is worth noting one disclaimer that is relevant to this chapter: in humans, solitude is mostly seen as a behavioral function. As such, it may be not a cause but a consequence or a symptom. This chapter is based on the assumption that solitude in arachnids is a genetic trait inherent to the species, as opposed to humans, where solitude is more often a behavioral choice. As such, solitude will shape the spider's worldview, and not the other way around.

Individuality and Selfhood: The importance of the individual may be a central part of the spider ontology. Spiders may not conceptualize any distinction between 'self' and 'community' in the way humans do. Instead, their primary concern may be the individual's existence and experiences.

Otherness and alienation: In the individual's worldview, 'other' individuals may represent competition, danger or potential mates, but rarely friendship or cooperation. The concept of 'otherness' can be associated with deep alienation, which brings to mind the Hobbesian "state

of nature".[38] Spiders apparently have no ontological understanding of kinship or social ties, beyond these basic interactions.

Survival and self-reliance: Since spiders generally take care of themselves, their ontology may emphasize survival and self-reliance. Ideas of dependence or cooperation, which are very common in the social existence of Homo sapiens, may be largely absent or perceived negatively in the arachnids. The concepts of 'power' and 'ability' are likely measured in individual terms, based on the ability of each spider to survive and reproduce with minimal dependency.

Isolation and Existence: Being solitary creatures, spiders may perceive existence as inherently isolated. Their ontology may be devoid of concepts of shared experiences or collective consciousness. Existence can be seen as a series of individual experiences, with each individual navigating their own reality completely alone.

Mating and conflict: In the spider's solitary existence, interactions with others often revolve around reproduction and conflict. Therefore, the spiders' philosophy may see these as the primary modes of interaction with others. The nature of 'relationships' can be seen in terms of these essential interactions. It must be remembered that in certain species of spiders, the reproduction itself may lead to an act of predation, resulting in the death of one of the individuals (usually the male).

Maternal Care: Despite the above, while many spiders are solitary, in some species, the females exhibit maternal behaviors such as guarding the young or carrying them on their backs. As written above, sometimes the maternal care reaches an extreme point of altruism in which the mother will sacrifice herself as a meal for her offspring. This feature certainly raises questions about the connection and relationship between individuals, and may introduce a sense of 'family' or 'community' into the spider ontology, which is usually focused on the single individual. Philosophical concepts and questions about the mother's duty and sacrifice, the strong bond between the mother and her offspring, can also lead to ideas of protection, nurturing and passing on life from generation to generation.

From their radical individuality to their unique perceptions of 'otherness', spiders invite us to question the boundaries of 'self', 'community' and 'existence'. Their way of life - ranging from survival and complete self-reliance to the subtleties of extreme maternal care - makes us re-evaluate our ideas of power, relationships and sacrifice as humans. The spider reveals a unique

[38] See Hobbes, T. (1967). *Hobbes's leviathan*. Рипол Классик. pp. 92-97

philosophical landscape, emphasizing the importance of moving beyond anthropocentric frameworks, despite the inherent contradiction that such an investigation cannot be entirely free from a human perspective, as previously argued.

Instinct Driven Ontology

This is the most problematic chapter for me, and I almost left it out. To a large extent it can be said that it represents remnants of the very anthropocentric view, which attributes to all animal behavior instincts over calculation and conscious choice. As we have seen in the sources quoted above, evidence of learning from mistakes, planning ahead, memory, and even the ability of judgement and choice have been documented quite a bit in the research conducted on spiders in recent years. However, since this thought also resonates in very significant sections of the study of human behavior (especially in psychoanalysis), which treat many human behaviors as expressions of instinctive impulses that the ego simply could not control, I nevertheless chose to write this chapter anyway, and to present the outline proposed here, for an ontology that involves instincts, rather than learned behavior.

Determinism and Inevitability: Based on our current understanding, spiders appear to operate largely on instinct, their actions seemingly preprogrammed by their genetic makeup rather than learned or chosen. This quality may lead to an ontology that emphasizes determinism and inevitability. ‘Choice’ can be seen as non-existent, and every event and action can be seen as predetermined.

Action and Identity: Assuming that behavior is so closely tied to instinct, spider ontology might equate ‘action’ and ‘identity’ more closely than we do in human ontology. What a spider *does* may appear to be the basic expression of what it *is*. Philosophical discussions may focus on actions rather than abstract concepts of identity or personhood. This is an interesting thought about the relationship between the individual and the purpose he fulfills in the world, and how our identity is structured and shaped by this purpose.

Nature and nurture: The notion of ‘nurture’ or ‘learned behavior’ may not feature prominently in spider ontology, if at all. The focus can be on ‘nature’ or instinct, where every creature is born with a fixed set of behaviors. The idea of personal growth or change over time may be minimal to non-existent.

Purpose: Given their seemingly pre-programmed actions and behaviors, arachnids might interpret the 'purpose of life' in quite straightforward terms: to follow one's instincts to survive, reproduce, and ensure the survival of one's offspring.

Freedom and Necessity: A spider's worldview might not encompass a concept of 'freedom' in the way humans understand it. Life can be seen as a series of necessary actions, driven by instinct. On the other hand, it might not be seen and perceived as a 'coercion', but simply as the way things work.

Summary

The above article sought to present a speculative outline for a spider ontology. As the investigation deepens, we find ourselves trapped in a complex web of ideas, perspectives and hypotheses that challenge our anthropocentric view of existence. The unique sensory perception of arachnids, encompassing vibration, chemical signals, and touch, invites us to reimagine our perception of reality, prompting us to consider existence through a 'framework' that underscores tangible and direct experiences. The silk web, an extension of the spider's body and senses, blurs the boundaries between the self and the environment, and casts doubt on our own understanding of selfhood and the relations and affinities with the world around us.

The solitary existence of spiders and the predator-prey dynamic shed further light on the notions of individuality (a concept I hesitate to suggest humans fully embrace), survival, and the omnipresent duality of life and death. The spiders' (supposed) cyclical concept of time disrupts our linear perception of past, present, and future, emphasizing patterns of repetition, recurrence, and renewal. Likewise, the intriguing ability of spiders to restore lost and damaged body parts, paints a picture of a changing and regenerating self, and emphasizes qualities of survival and adaptation. This matter also motivates us to question, or at least reflect on, the concepts of continuity and identity.

In the era in which we live, which has long been called the 'Anthropocene', and is defined by extreme changes in the environment caused by humans, building an outline for a spider ontology serves as a reminder of the countless ways of 'being' in the world. It is a call to recognize, respect and study the world from non-human perspectives. As we weave the web of our future, we must remember that life consists of countless threads, each of which represents

a unique form of existence. By gaining respect for these diverse threads, we can strive for a more balanced and sustainable world.

While spider ontology may initially appear entirely alien, its tentative outline nonetheless provides us with substantial insights. Considering the spider perspective forces us to step out of our anthropocentric comfort zones and see the world from a radically different perspective. Although we will probably never fully understand the existential complexities of this strange alien creature's life, the attempt to do so enriches our understanding of the world and our place within it. The spider's web, therefore, symbolizes not only a network of silk threads but also a nexus of knowledge, wisdom, and profound insights, inviting us to weave new narratives for our collective future on Earth.