The Senses of the World

Art Confronting Data

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The current era is characterized by the production of vast amounts of data across all sectors of society. This is made possible by ubiquitous technologies that can collect data from every human and non-human entity on the planet, as well as any environmental phenomena. Artistic practice offers a suitable platform for the endeavour to isolate specific expressive and signifying features from this indistinct mass of data. This paper focuses on a relatively overlooked field of research, where technology interacts with abstract data to extract what I propose to define as their "aesthetic sense". Such an expression addresses the peculiar dynamics enabling art to move beyond the purely informative function of data, towards a different goal – designing experiences that turn the audience into perceptive participants, engaged in the otherwise imperceptible events and relations that are recorded and communicated by data. Technologies thus become media of polyphonic expression, able to give voice to other ways of feeling and being in the world. Emerging through computation is a sort of feeling that permeates the entire fabric of reality, of which any entity in the universe can become the protagonist. As a result, art stands out as a privileged gateway to a particular experience of reality. This kind of experience will be theoretically analysed in the present essay starting from the philosophy of Alfred North Whitehead, specifically from his notion of "feeling".

Keywords: Ubiquitous computing, Data, Art, Alfred North Whitehead, Feeling.

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1. Streams of Feeling

Abandoning the primacy of sight and perceiving the world from the perspective of a spider: this is the invitation extended by Argentine artist Tomás Saraceno to visitors of *Free the Air: How to Hear the Universe in a Spider/Web*, a monumental installation presented at The Shed in New York in the spring of 2022, as part of the exhibition *Particular Matter(s)*. Inside a spherical chamber, permeated by a thin layer of mist, two metal web-like structures are suspended at heights of 3 and 12 meters, respectively. As participants traverse them, they experience a series of vibrations that cause the metallic webs to oscillate. These are the very vibrations produced by spiders – by plucking, tapping, drumming, or trembling the threads of their webs – to communicate with one another and with other insects, marking territory, capturing prey, or seeking mates. Lacking the capacity for vision, spiders construct tools that allow them to perceive the rhythmic movements of their surroundings. To this end, they employ different types of silk, each of which imparts distinct physical qualities to the web and influences the way vibrations propagate through its threads. These barely perceptible vibrations were recorded by the artist using a sophisticated system of sensors, along with the sounds generated by carbon particles in the atmosphere as they settle onto the webs, altering their structure. By exposing participants to an alternative mode of perceiving, experiencing, and defining the world, *Free the Air* functions as a platform for interspecies communication. It fosters an awareness of a «multiplicity of scales and phenomena», inviting us to «use a multi-lens to show we coexist and share the space with more-than-human beings»[1].

How a coral "feels" is the question posed by Croatian artist Maja Petrić with *Specimen of Time*, an imposing sculpture that houses, within a wooden frame, a series of transparent glass cubes containing optical filters. This generative artwork employs light and data to represent the life of the

[1] E. Enderby (ed. by), *Tomás Saraceno: Particular Matters(s)*, Buchhandlung Walther König, Köln 2022, p. 31.

underwater ecosystem of Australia's Great Barrier Reef. The optical filters and light replicate the sensory experience of corals, while tidal data governs the movement of the piece. In an era of climate change, coral reefs face two opposing threats: on the one hand, powerful waves generated by hurricanes and cyclones can shatter corals, dispersing their fragments; on the other, prolonged periods of low tide expose them to high temperatures and ultraviolet radiation. By depicting the tidal cycle in real time, the sculpture highlights the transformations that these relatively pristine environments are undergoing. To achieve this, the artist employed computer vision algorithms to analyze footage of the reef, extracting information about tidal patterns, such as flow levels, water movement, and depth. These data were then translated into dynamic beams of light, with variations in intensity, color, and motion corresponding to different characteristics of the tides. Enclosed within *Specimen of Time* is a becoming in continuous evolution – a becoming marked by the ebb and flow of the tides, which, in the artist's intent, should foster a direct connection to the rhythms of nature, bringing the viewer closer to the heartbeat of our planet[2].

A heartbeat that may coincide, for example, with the upward movement of fluids through the porous interior of trees. This is the phenomenon depicted by Dutch artist Thijs Biersteker in *Xylemia*. Stylized in the form of a climbing plant whose branches wrap around the trunk of a tree, the installation takes its name from *xylem*, the vascular tissue responsible for transporting water and dissolved nutrients from the roots to the rest of the plant. This flow – driven by root pressure, capillary action, and transpiration – is essential to the tree's health and its ability to respond to environmental conditions. Through a series of sensors capable of measuring, like a modern stethoscope, the sap flow and recording in real time the amount of water absorbed by the tree, the work reveals the mechanism by which the plant interacts with its environment. By making visible the tree's vital process – one in which the viewer may find a reflection of their own – the artwork seeks to foster a deeper sense of connection and empathy toward these living beings. It aims to encourage a sense of responsibility and urgency in their preservation, exhorting us to recognize and protect the interdependent systems upon which we rely[3].

Whether it be the vibrational frequencies of a spiderweb, the rising and falling of sea levels around a coral formation, or the flow of fluids within a plant, at the core of the artistic practices just described are, to borrow Alfred North Whitehead's apt expression, «streams of feeling»[4]. A feeling that,

[2] See https://www.majapetric.com/specimens-of-time-tide.
[3] See https://thijsbiersteker.com/xylemia.
[4] A.N. Whitehead, *Modes of Thought*, The Free Press, New York 1968, p. 231. Providing a detailed account of Whitehead's metaphysics falls outside the scope of this article. For this reason, reference is made to: C. Sini, *Whitehead e la funzione della filosofia*, Marsilio, Vicenza 1965; L. Vanzago, *Modi del tempo. Simultaneità, processualità, relazionalità tra Whitehead e Merleau-Ponty*, Mimesis, Milano 2001; Id., *L'evento del tempo. Saggio sulla filosofia del processo di A.N. Whitehead*, Mimesis, Milano 2005. For a detailed discussion of the specific concept of "feeling", see: M. Élie, *La vie perceptive selon Whitehead*, in "Revue philosophique de la France et de étranger", 131/1 (2006), pp. 7-

according to Whitehead, is not confined to the prerogative of a conscious subject, but rather permeates the entire fabric of reality, constituting the very condition under which any entity comes into being and endures. The British philosopher maintains that everything is constituted by appropriating various elements of the surrounding reality, which become part of its nature through a process that begins with perception. It is not so much a *feeling* as it is *feeling-as-experiencing*; not a content to be possessed, but an *act* in itself: the continuous emergence of a unity of existence from the anonymous background of the world.

This multiplicity of perceptual acts, which constitutes the ultimate substance of reality, can today be captured and recorded through the vast network of technologies embedded across the ecosystem, and subsequently translated into data. Artistic practices play a crucial role in the attempt to extract expressive and meaningful characteristics from the heterogeneous mass of data fed into the digital flow. By translating a range of information – abstract and thus confined just below the threshold of perception – into concretely perceivable forms composed of light, color, sound, tactility, and movement, such practices aim to make perceptible even the unnoticed becoming that certain data encapsulate. In this way, the realm of art – redefined through its encounter with technology – emerges as a privileged access point to a particular experience of reality; an experience that, in the present contribution, we will examine precisely through the lens of Whitehead's philosophy[5].

Before proceeding, however, it will be necessary to outline the framework of so-called "ubiquitous technologies", clarifying how the data they produce can be integrated into artistic practice.

2. Vectors of Alterity

Gilbert Simondon pointed out that everything we think of as an "individual" is not a fixed thing that stays the same. Instead, it is a constantly changing structure that does not have a separate identity outside of its process of becoming. Simondon argues that an individual *is* its own process of "individuation". It only exists as long as this process continues, and when it ends, what is left is «a result that will begin to degrade and not a veritable individual»[6]. Each individual comes from a "pre-individual" state, a generating power that fuels any individuation. This power is not used up in the process; it stays active within the individual as its "associated environment". This term describes the

20 2006; S. Shaviro, *Without Criteria. Kant, Whitehead, Deleuze, and Aesthetics*, The MIT Press, Cambridge-Massachusetts 2012, pp. 45-70.

[5] In this regard, Giulio Piatti attributes to Whitehead the development of a "cosmological aesthetics", grounded in the overcoming of the subject–object dualism and in the extension of perception to encompass the whole of reality – an aesthetics in which the analysis of what is perceived and felt must serve as the foundation for an ontological analysis of the world itself. See G. Piatti, *A cosmological aesthetics: feelings and events in A.N. Whitehead*, in "Studi di estetica", 2/2019, pp. 243-254.

[6] G. Simondon, *L'individuation à la lumière des notions de forme et d'information*; trans. by by T. Adkins, *Individuation in Light of Notions of Form and Information*, University of Minnesota Press, Minneapolis 2020, p. 49.

context where the individual is created and with which it keeps communicating and exchanging, something vital for its ongoing development. This leftover power an individual carries is what makes its further becoming possible. Characterized as a «charge of the undetermined, i.e. of pre-individual reality that has passed through the operation of individuation without being effectively individuated»[7], the residual potential that the individual carries with them represents the condition of their becoming. According to Simondon, not only living beings but also technical objects organize around themselves an associated environment by which they are, in turn, conditioned within a relationship of circular and reciprocal causality. This is a mixed environment, both technical and geographical, a shared medium between fabricated elements and the natural world, as well as a conduit for the energy and information necessary for the functioning of the technical object[8].

We can certainly say that the unprecedented feature of today's "associated environments", filled with digital technologies and vast computer networks, is the presence of an immense amount of data. To go back to Simondon's ideas, this data today represents both the results of individuation processes and the potentials that were not fully realized during those processes, which now offer opportunities for new individuation. Modern computing methods help us gather information from every part of our environment and the things that happen within it. People, plants, animals, rivers, oceans, weather events, cities, movements, consumption, emotions, opinions, desires – it seems that every part of reality can be transformed into data. This data is then analyzed by artificial intelligence, which looks for patterns and connections to make predictions and forecasts[9]. Whether it is generated or extracted, stored or organized in different ways, data is now necessary to understand and interpret the world, and to take action on many different levels.

Even artistic activity is therefore not excluded from the opportunity to draw on this mass of information. For those practices that are developing in contact with the new media, with interactive technologies and with the network, data constitutes the indispensable basis of the creative process. This process generally consists in writing a code that governs the interaction between an input and an output – that is, in defining the procedures by which certain stimuli are processed by a computational system and transformed into audiovisual materials. In constructing the repertoire of incoming signals, artists today can draw upon the most diverse data sources, connecting them through algorithms in

[7] *Ivi*, p. 352.
[8] See G. Simondon, *Du mode d'existence des objets techniques*; trans by C. Malaspina & J. Rogove, *On the Mode of Existence of Technical Objects*, University of Minnesota Press, Minneapolis 2017, pp. 59-62.
[9] For an initial overview of the process of datafication, see V. Mayer-Schönberger, K. Cuckier, *Big Data: A Revolution That Will Transform How We Live, Work, and Think*; Eamon Dolan/Houghton Mifflin Harcourt, Boston 2013. For a more in-depth discussion of its ethical and political implications, see G. Hasselbalch, *Data Ethics of Power. A Human Approach in the Big Data and AI Era*, Edward Elgar Publishing, Cheltenham 2021. The potentialities in the artistic field, by contrast, are developed with remarkable originality by S. Iaconesi, O. Persico, *Digital Urban Acupuncture. Human Ecosystem and the Life of Cities in the Age of Communication, Information and Knowledge*, Springer, Switzerland 2017.

potentially infinite combinations. In doing so, they endow the artwork with an appearance of spontaneous evolution and introduce, into the viewer's experience, an element of randomness and unexpected novelty.

Data processing occupies a central place in the new forms of art that use artificial intelligence as a means of production. They are based on the synergistic cooperation between a human agent and a computational agent, terms that influence each other, vying for the same authorship of the work. The artist submits a set of data to the artificial intelligence system and waits to discover how it will be reprocessed, only to intervene again and modify it, in a reciprocal interaction that constitutes the very meaning of the work[10].

Data visualization is also rapidly expanding in the fields of art and design[11]. It is a technique for representing data by means of diagrams, infographics, cognitive maps and interactive animations. These representations are generally constructed from nodes and lines that connect the nodes to each other. They aim to communicate, in a comprehensible and visually appealing way, the relationships that exist between large quantities of data. In doing so, they prove to be an effective application of the systemic perspective, which stands in contrast to the reductionist approach typical of classical science. While the latter prescribed a movement from complexity to simplicity, from totality to individual elements – treating analysis as a prerequisite for evidence – the systems model instead proposes that elements be understood in terms of their mutual interactions.

However, it is a different use of data that we are interested in highlighting here. It is possible in fact to identify a field of research that is characterized by the attempt to bring forth, from the abstraction of data, what I propose should be defined as its aesthetic sense. This expression indicates the effort, on the part of some artistic operations, to go beyond the simple representative and informative function of data, to create experiences that make the public *sensitive* and *participant* in the phenomena and events that the data seems to suggest. Not only that: thanks to their interactive character, they can sometimes offer spectators the opportunity to take part in first person in the aesthetic process, influencing, with their own direct intervention or by means of the generation of data, the evolution of the work to the point of modifying its outcome in a way that is not entirely predictable.

[10] The main tool for producing such artworks is the Generative Adversarial Network (GAN), a machine learning method used to train computers to autonomously generate realistic images. Its functioning is based on the competition between two neural networks. The first, called the discriminator, is "trained" using a dataset derived from the real world (training set); the second, known as the generator, is tasked with producing data that resemble as closely as possible those used to train the discriminator. The main lines of debate on the subject have been drawn by A.I. Miller, *The Artist in the Machine. The World of AI-Powered Creativity*, The MIT Press, Cambridge-Massachusetts 2019. An introduction to the relationship between aesthetics, digital art, and the most recent developments in artificial intelligence is also offered by A. Barale, *Arte e intelligenza artificiale. Be my GAN*, Jaca Book, Milano 2020.

[11] For a more in-depth analysis, see M. Lima, *Visual Complexity. Mapping Patterns of Information*, Princeton Architectural Press, Princeton 2011.

This use of technology in art builds on the ideas of American computer scientist Mark Weiser. In the early 1990s, he foresaw the possibility for computers to emerge out of their "electronic shell" and innervate their surroundings, transforming everyday objects (e.g. household appliances) into sensors capable of detecting, processing and transmitting information[12]. *Embodied virtuality* is the expression employed by Weiser to define the new model of ubiquitous computing, differentiating it from *virtual reality*. Projecting users, by means of prosthetic tools, into artificial universes where the external reality and its inhabitants cease to exist, the latter cuts off «desks, offices, other people not wearing goggles and bodysuits, weather, trees, walks, chance encounters and, in general, the infinite richness of the universe»[13]. By contrast, embodied virtuality considers the «nuances of the real world to be wonderful, and aims only to augment them»[14]. Its goal is to reverse the «centripetal forces that conventional personal computers have introduced into life and the workplace»[15], and to restore instead «the patterns in the universe and ourselves within them»[16].

This is exactly what we see in the art we have been discussing. By using ubiquitous technologies, we can connect different things – such as spiders, corals and plants – to systems that capture their information. This information is then translated into something meaningful that we can experience. In each case, computing acts as a "vector of alterity" increasing the interactions in the real world and connecting different elements through a shared feeling.

3. "Prehending" the Universe

Connecting with the rest of the universe to realize one's own individuality – that is what Whitehead means by "feeling". While traditional philosophies «presuppose a subject which then encounters a datum», Whitehead's philosophy of organism, by contrast, presupposes «a datum which is met with feelings, and progressively attains the unity of a subject»[17]. Therefore, *feeling* is the very basis for anything coming into being; to exist means first and foremost to *feel* [18].

[12] This is the principle behind the so-called Internet of Things, a term used in computer science to refer to a wide range of objects equipped with sensors and software that allow them to interact – with minimal human intervention – by collecting and exchanging data via wireless networks. For a more in-depth discussion of the ubiquitous computing model, see A. Greenfield, *Everywhere: The Dawning Age of Ubiquitous Computing*, New Riders, San Francisco 2006.
[13] M. Weiser, *The Computer for the 21° Century*, in "Scientific American", 265 (1991), p. 94.
[14] M. Weiser, *Ubiquitous Computing*, in "IEEE Computer 26" 10 (October) 1993, pp. 71-72.
[15] M. Weiser, *The Computer for the 21° Century*, cit., p. 104.
[16] See M. Weiser, *Open House*, in "ITP Review 2.0", March 1996 (https://calmtech.com/papers/open-house.html).
[17] A.N. Whitehead, *Process and Reality*, The Free Press, New York 1978, p. 155.
[18] Whitehead himself defines his philosophy of organism as a critique of pure feeling. This perspective is developed in opposition to the metaphysical traditions of Kantian and Hegelian derivation, which tend to conceive experience as the product of a schematization of thought. In this regard, Whitehead criticizes Kant for having placed too much emphasis on the "higher" modes of human functioning, at the expense of the more primordial forms of experience – namely, those related to sensory reception. See A.N. Whitehead, *Process and Reality*, cit., pp 112-114.

Too often, Whitehead argues, philosophy has reduced the structure of experience to the relation between subject and object, describing this relation as one between knower and known. However, the claim to pure knowledge corresponds to a mature and abstract phase of experience, whose origin is rather emotional in nature. It is properly the «rise of an affective tone originating from things whose relevance is given»[19]. Such an affective tone at the basis of experience is, in Whitehead's view, aptly expressed by the word "concern", which allows the correlation between subject and object to be stripped of any purely cognitive reference: the subject feels a concern for the object, and this concern integrates the object into the subject's experience as one of its constitutive components. Subject and object are thus relative and perfectly interchangeable terms, whose supposed division ultimately dissolves within the single dynamic process of experience.

This process does not revolve around a substance understood as an immutable substratum of change, a persistent support for variable qualifications. According to Whitehead, the idea of substance is, in fact, an abstraction which – despite being deeply rooted in language and logic – proves inadequate for describing the inner nature of things, since it neglects the two structural elements of reality: its temporal aspect and its constitutive relationality. These are precisely the defining features of *actual entities*. By this expression, Whitehead refers to «the final real things of which the world is made up», «the final facts», «drops of experience, complex and interdependent»[20]; basically, anything that exists with concrete reality. He says «an actual entity is a process, and is not describable in terms of the morphology of a "stuff"»[21]. The use of the adjective "actual" thus serves to indicate that everything that exists coincides with its very occurrence. Becoming does not imply a subject-substratum upon which mutations unfold – that is, there are not entities and their becoming; rather, entities exist only insofar as they become, to the point that «an actual entity has "perished" when it is complete»[22], «its birth is its end»[23]. So, how do these actual entities become individuals?

The activity of self-constitution unfolds as a process in which a disjunctive multiplicity is brought together into an emergent unity. In order to achieve this, each actual entity "appropriates" various elements of the universe from which it arises, through a process Whitehead terms "prehension". The term is coined on the basis of Leibnizian models of "perception" and "apperception", which refer respectively to the unconscious and conscious modes through which monads experience one another. According to Whitehead, however, these concepts bear too close an affinity to the notions of "consciousness" and "representational perception", with which they risk being conflated. By contrast, the term *prehension* refers more generally to the way in which an actual entity enters into relation

[19] A.N. Whitehead, *Adventures of Ideas*, The Free Press, New York 1961, p. 226.
[20] A.N. Whitehead, *Process and Reality*, cit., p. 18.
[21] *Ivi*, p. 41.
[22] *Ivi*, pp. 81-82.
[23] *Ivi*, p. 80.

with the surrounding world, including «as part of its own essence, any other entity, whether another occasion of experience or an entity of another type»[24]. Thus, against the idea of an autonomous substance that requires nothing else in order to exist, Whitehead asserts the relational nature of actual entities – that is, the fact that in order to exist they must necessarily enter into relations with one another, to the point of claiming that «every actual entity is present in every other actual entity»[25].

Preceding entities become elements in the existence of an actual entity, insofar as, having completed their process of actualization and exhausted their creative drive, they serve as objects or data for the entity undergoing actualization. However, the reception of preceding entities as objects or data should not be understood in terms of mere passivity, since it consists also – and above all – in an activity of synthesis: «Thus the process of experiencing is constituted by the reception of objects into the unity of that complex occasion which is the process itself. The process creates itself, but it does not create the objects which it receives as factors of its own nature»[26]. The process of experience described by Whitehead does not presuppose an already subsisting individuality that subsequently encounters data to which it reacts. Rather, it introduces an individuality that emerges and progressively attains unity through an operation of receptive synthesis.[27]Likewise, the world is never simply "there" – fixed, unchangeable, objective, merely waiting to be perceived – but is constituted in relation to the entities that interact with it at any given moment. Anchored to the world by virtue of its prehensions, each entity brings forth an entirely novel perspective, in which the world is unified within an ever-new nexus.

The integration into unity which characterizes the formation of an actual entity has *feeling* as its necessary vector: «Each actual entity is conceived as an act of experience arising out of data. It is a process of "feeling" the many data, so as to absorb them into the unity of one individual "satisfaction"»[28]. Feeling is, in other words, the agent through which the elements of the world are introduced into the constitution of an actual entity. «The feelings», Whitehead explains, «are inseparable from the end at which they aim; and this end is the feeler. The feelings aim at the feeler as their final cause. The feelings are what they are in order that their subject may be what it is»[29]. It

[24] A.N. Whitehead, *Adventures of Ideas*, cit., p. 300.
[25] A.N. Whitehead, *Process and Reality*, cit., p. 50.
[26] A.N. Whitehead, *Adventures of Ideas*, cit., pp. 229-230.
[27] Whitehead repeatedly emphasizes that his philosophy represents a kind of reversal of the Kantian perspective: «For Kant, the world emerges form the subject; for the philosophy of organism, the subject emerges from the world – a "superject" rather than a "subject"». See A.N. Whitehead, *Process and Reality*, cit., p. 88. On this point, Vanzago comments: «The model of experiential synthesis that Whitehead proposes differs from the Kantian one insofar as multiplicity is not given to a pre-existing subject that must receive it and give it form – that is, give it meaning. Instead, subjectivity itself emerges through this "donation", which is, moreover, a peculiar kind of donation because it lacks a recipient; in other words, the recipient is constituted within the donation itself». See L. Vanzago, *Modi del tempo. Simultaneità, processualità, relazionalità tra Whitehead e Merleau-Ponty*, cit., pp. 326-327 (my own translation).
[28] A.N. Whitehead, *Process and Reality*, cit., p. 40.
[29] *Ivi*, p. 222.

is not possible to abstract feeling from the individual entity that experiences it: how an actual entity *feels* is, in fact, *what* that actual entity *is*. It is feeling that absorbs the elements of the universe, synthesizing them in the constitution of its subject; it is feeling, in other words, that defines the actual entity in its absolute particularity. No element of the universe, by the mere fact of existing, is therefore devoid of some capacity for feeling. Organic entities, certainly, are not: «a plant grows downwards to the damp earth, and upwards towards the light», «a jellyfish advances and withdraws»[30], and in doing so, they exhibit a certain perception of their causal relation to the world beyond themselves. But inorganic entities, Whitehead argues, are not exempt either: even a stone could be asked to «ask a stone to record its autobiography»[31], for it possesses «a reference to its past, when it could have been used as a missile if small enough, or as a seat if large enough. A "stone" has certainly a history»[32].

The extension of perception to the entire fabric of reality does not, at first, involve the activity of consciousness. Consciousness arises only occasionally, at higher stages, to illuminate the earlier ones with clarity and distinction. Far removed from the lucidity of consciousness – yet forming the necessary basis of experience – are what Whitehead calls "simple physical feelings", the most primitive type of perception. A simple physical feeling is «one feeling which feels another feeling»[33]. It thus consists in the simple appropriation, by an actual entity (the subject), of another entity that serves as the datum of the feeling. These forms of feeling are also referred to as "acts of causation", in which the actual entity that constitutes the initial datum functions as the cause, the physical feeling as the effect, and the entity conditioned by that effect coincides with the perceiving subject, which thereby comes to be individuated.

As the foundation of the connection of the many into one, of the mutual interpenetration of the things of the world, feeling thus coincides with experience itself at its original stage, prior to any analysis. In channeling the multiple nuances of the world into the constitution of a subject, it also makes possible the continuous advance of the universe into ever new and diverse forms. In a word: its *concrescence*. With this term, Whitehead designates the intrinsic relationality of actual entities, enacted through their mutual immanence, that is, through their entering, by way of feeling, into one another's constitution. The term is derived from a Latin verb meaning "to grow together", and, in his view, «has the advantage that the participle "concrete" is familiarly used for the notion of complete physical reality. Thus Concrescence is useful to convey the notion of many things acquiring complete complex unity»[34]. Everything that exists passes through a ceaseless flow toward its own definiteness,

[30] *Ivi*, p. 176.
[31] *Ivi*, p. 15.
[32] *Ivi*, pp. 121.
[33] *Ivi*, p. 236.
[34] A.N. Whitehead, *Adventures of Ideas*, cit., p. 303.

upon attaining which it "perishes" and becomes the potential for further emerging individualities. Perishing thus coincides with the very principle of becoming, «how the past perishes is how the future becomes»[35]. Concrescence is the process through which entities that have already attained their actuality – that is, that have become fully determinate – enter into the constitution of new actual entities. And this occurs, as has been shown, by means of *prehensions*, that is, through acts of *feeling*.

4. In conclusion: aesthetic experience and concrescence

An "actual entity" only exists as long as it is becoming something, and this becoming is shaped by its interactions with other entities. Through this "prehensive" activity, the act of being and the act of becoming happen at the same time. This applies to everything in the universe. Whitehead specifically states, «the philosophy of organism attributes the "feeling" throughout the actual world»[36].

This widespread feeling, which anything can experience, is shown through computation in the examples we looked at earlier: the spider "senses" the world through the vibrations of its web; a coral takes in a cosmic order of light and water and relates it to its tiny molecules. A plant does the same by absorbing nutrients from the soil through its xylem. In all three cases, we are dealing with "prehensions" that do not allow for a clear separation between the elements that compose individual experience on the one hand, and those that compose the external world on the other. No individuality exists independently of its relational possibilities and therefore cannot be conceived apart from the environment, which is essential to the constitution of its very nature.

We've seen that many processes that used to disappear without a trace can now be recorded using advanced technology and turned into data. Art takes this data and transforms it into what we might call "forms of feeling". This is done to involve the viewer in the complex and ever-changing relationships we see in nature. It invites the viewer into the flow of time where different parts of nature influence each other. When viewers recognize the ways a spider, a coral or plant experience the world, they can connect with those experiences and even reach a kind of "feeling in unison". This creates an aesthetic experience, which, as Whitehead would say, is a perfect example of "concrescence". It's a place where different realities come together, turning into a single entity through a shared process of becoming.

Largely overlooked by both critics and market interests, the field of research under examination offers substantial contributions to the study of the relationship between art and technology. It is a well-established fact that new digital technologies have become the principal domain for artistic

[35] *Ivi*, p. 305.
[36] A.N. Whitehead, *Process and Reality*, cit., p. 177.

experimentation – arts which, in turn, increasingly take on the role of revealing these technologies' "productive" potential. This is, however, no simple task; it is often hindered and compromised by dynamics that are entirely external to the artist's practice. More than ever, the art world today is shaped by the interests of communication and advertising, by spectacle, and by market research centered on emotions. As a result, the symbolic content of the artwork is frequently reduced to the appealing display of a striking gimmick. Its inspirational force – the ability to generate infinite possible worlds – is subordinated to the seductive logic of the "experience economy". In this context, the heavy reliance on new technologies often appears to betray the nature of mere expedients, designed solely to enhance the sensational dimension of aesthetic experience, emphasizing promises of novelty, uniqueness, and unrepeatability that make it maximally desirable. Consequently, the multiple insights emerging from the neo-technological sphere risk being reduced to mere slogans, where the use of technology is celebrated in itself, to the detriment of any serious and reasoned reflection on the potential of such practice, its limits, and above all, its necessity in relation to art.

It is precisely this necessity that seems to be assumed by the artistic practices from which the present contribution originates. By distancing themselves from purely commercial and entertainment-driven imperatives, these practices invite us to interpret contemporary technologies as supports for polyphonic expression, capable of giving voice to alternative modes of sensing and being in the world. Through the mediation of data and computation, these modes enter into communication with one another, generating a truly heterogeneous network of relations, a network that is increasingly plural and dislocated, through which the most disparate entities – spider, coral, plant – become bearers of a difference that generates meaning. It is this very difference that emerges each time one actual entity becomes part of the concrescence of another, thus revealing that original correlation which, according to Whitehead, pervades the entire universe.