TO RECOSMIZE
Re-acting humanity as a way out of modernity *Alice Pontiggia*

Fundamental terms to understand the cosmos' constructions and perception ruptures

"For a moment's duration, the world stands still. A human moment lasts one-eighteenth of a second."

Jakob von Uexküll, A Foray into the Worlds of Animals and Humans, 1934

Jakob von Uexküll, the Baltic-German biologist and philosopher, after the study of animal behaviours, stated that we sit too comfortably in the illusion of the existence of a one and only space and time for all living beings, one world for all. Alternatively, he claims that the world for us is a constant, unceasing repetition of multiple functional cycles that activates between the subject and its habitat. If the environment is known through subjective perceptions, each living being, including the human, will be enclosed in an ever-changing perception bubble that is colliding with other bubbles. Therefore, "there is no space independent of subjects."

In 1985, French geographer and philosopher Augustin Berque rediscovered the term 'mesology' in an effort to translate the neologism *fudogaku*, developed by Japanese philosopher Tetsurō Watsuji. Previously used to describe the 'study of human surroundings,' Berque once again started adopting the word 'mesology,' re-defining it as the trans-modern discipline that studies the milieu (translation for *Umwelt* or *fudo*). Milieu is the set of ecological-technical-symbolic relationships that a society creates from the process linking the inseparable halves of the individual physiological body and its raw environment (*Ungiven*), the abstract and objective datum studied by modern science. This process, co-creating, continuously and at the same time, the human and the non-human, the matter and the symbol, and a specific cosmos, is called 'mediance'—from the Latin *medietas* (*halves*²), "the structural moment of human existence."

The fundamental meaning of the Greek term $\kappa \dot{o} \sigma \mu o \varsigma$ (cosmos) is that of order. An order that encompasses, in mutual relationships, the beliefs of a society, its social dynamics, the material disposition of things over the land they inhabit, land treatment and management, the evolution of their techniques and their aesthetic. Different societies correspond to different cosmologies, id est, the universal order that the members of that society believe organizes and moves their world in terms of space, time and matter; it is the metaphysics explaining the origin of their universe and that is expressed through religious credo, mythemes, mathematical models, or any other kind of beliefs. These paradigms are therefore passed down in time through generations due to education, rituals, myths and other practices. Different societies also engage in different cosmotechnics, which are "the unification of the cosmos and the moral—human behaviour metaphysics—through technical activities, whether craft-making or art-making."

^{1.} Jakob Johann Freiherr von Uexküll (1864-1944), A Foray into the Worlds of Animals and Humans, 1934 (University of Minnesota Press, 1984), p. 70.

^{2.} The term halves is intended as a representation of the meeting of two pluralities, and not a mere coupling.

^{3.} Augustin Berque, An enquiry into the ontological and logical foundations of sustainability: Toward a conceptual integration of the interface 'Nature/Humanity' (in the volume Global Sustainability 2, Cambridge University Press, 2019), pp. 1–10.

^{4.} Yuk Hui, Cosmotechnics as Cosmopolitics (e-flux journal, Issue 86, 2017)

In our digital era, technology is the engine of globalization, understood both as a force of convergence in space and synchronization in time. As part of the modern-urban society, which is materially, logically and ontologically founded on the Modern-Classical-Western Paradigm [MCWP],⁵ the human being has been gradually led to 'decosmization:' the loss of the reference points of the order that co-constitutes us and our world; the loss of the cosmos. This happened through a process of abstraction of our Being from its environment: ontologically with dualism, and logically with the law of the excluded middle.⁶ Historically, decosmization can be summarized in three stages: "first, conceiving absolute Being, namely that of the God of monotheism, who is purely transcendental since he is both subject and predicate of himself, and correlatively depends on nothing but his own substance for existing; second, applying the same principle to the human, as symbolized by Descartes' cogito, first expression of the modern subject, and correlatively of the modern object; third, implementing technically that same principle, in the human subject, in the form of a cyborg trans or post-human, and correlatively in geoengineering."⁷

Decosmization makes us feel detached from our bodies and from others, both human and non-human beings. This has happened through a long process of 'dressage.' This term has been used by Henri Lefevbre in his posthumous volume *Rhythmanalysis: Space, Time and Everyday Life* to describe the imposition of specific gestures and movements with the aim of imprinting specific mental, emotional and physical automatisms to the individual. This training is carried out through the repetition of specific rhythmic patterns, usually embedded in ritualized dynamics. According to Lefevbre: "Humans break themselves in [se dressent] like animals. They learn to hold themselves. Dressage can go a long way: as far as breathing, movements, sex. It is based on repetition. One breaks-in another human living being by making them repeat a certain act, a certain gesture or movement." With the aim of imprinting socially recognized manners on the individual, the process of dressage shapes society.

In fact, dressage defines linear time, that is, social time, and superimposes it on the organicity of cyclical time, that is, cosmic time. The implementation of dressage's rhythm is based on the alternation of the triad 'activity/rest/fun,' and maximizes its expression and effectiveness in institutions such as armies, offices, churches and schools. Managing to have an impact on the biological rhythms of trained subjects, dressage can cause arrhythmias between their own rhythms and the imposed rhythms, creating physical and nervous problems. The bodies of the tamed are altered, stripped and assume a use value. In the preparation for dressage indoctrination, special attention is paid to the bodies. In the first instance, by hierarchically cataloging them by species, race, class and gender in order to put forth a training strategy for each category, bodies also assume great importance because they are the interface that modulates all experiences and that

^{5.} Augustin Berque, op. cit., p.1.

^{6.} In logic, the law of the excluded middle states that every proposition, be it this proposition or its negation, is true. No third possibility is given.

^{7.} Augustin Berque, op. cit., p. 2.

^{8.} Henri Lefebvre, Rhythmanalysis. Space, Time and Everyday Life (Continuum, 2004), p.39. Originally published by Éditions Syllepse, 1992.

^{9. &}quot;Whereas normative stress helps us grow and adapt, chronic stress—stress that is constant and persistent—wears us down and harms every system in our body." Nicole LePera, *How to Do the Work* (Harper Wave, 2021), p. 74.

^{10.} Isn't it true that it is different to tame a lion than a dog? That a woman is required to follow different social rules than men? That a worker is asked for a moral code that cannot be shared by a nobleman?

builds all ideas. When dressage affects memory, first bodily and then mental, then automatism sets off: the need is recreated and only a crisis can break its repetition.

The rupture in the human / land relationship

For mesology, the thing we perceive is at the same time a subject (s), which has an existence of its own, and as a predicate (P) within our relationship with it. This relationship is mediated by an interpreter (I). The perception process is thus a 'trajective' one, in which the subject is perceived in a ternary (non-binary) s-I-P relationship. This trajective process is, over time, an evolutionary process in which, through generations, new predicates P, P, P, P, etc., overpredicate the S/P reality in (s/P)/P, ((s/P)/P)/P, (((s/P)/P)/P)/P, etc., constituting a trajective chain of perceptions. The logic of the identity of the subject is replaced by the logic of the identity of the predicate. Mesological knowledge is therefore based on how the subject is perceived and interpreted by the predicate through time.

How is the grass perceived by the cow? As food. How is the Earth perceived by humankind? Differently, depending on the cosmology to which the subject belongs. Due to anthropological and historical studies, we know that the notion of 'landscape' does not belong to all societies, or can have different and untranslatable meanings for each of them, possibly related to food related, medicinal or aesthetic values. Trying to offer a preliminary definition of it, I believe that landscape is the human perception of land, the geography of humans. A representation, an aesthetic visualization that stemmed from the eco-technical-symbolic relationship that binds a portion of land, territory and the human community inhabiting it. I believe landscape is therefore both the imaginary and the materialization of the cosmic dimension one lives in. A process of perceptual synthesis followed by imaginative integration. The perpetual co-production of all places, all insides and all outsides.

Via examples, we can investigate and identify the birth of the term landscape in Chinese and European societies. 11 In IV AD century China, the fall of the Han dynasty coincided with the expansion of Buddhism and Taoism, doctrines that exhort a human 'non-acting' towards the universal cycle and a closer approach to nature. Intellectuals then became hermits and began moving to remote places to contemplate natural beauty. Painters drew mountains—considered sacred places near heaven, home of the immortals—and poets described them. Through the combination of these two arts, the term that is mainly used to express the idea of landscape was born: shanshui, deriving from the juxtaposition of ideograms for mountain and water. This term closely links the ontological and aesthetic dimensions of what is seen and perceived; it refers simultaneously to the material being and its intrinsic essence, since there is no transcendence in the Taoist and Buddhist doctrines. According to common Chinese conceptual heritage, the being coincides with the sensible being, thus ignoring the membranes that separate body and spirit in western society: in V AD century Chinese paintings and poetry, the aim was to represent not only the matter-assembled-mountain, but also the idea of beauty that it emanates. According to most philosophies/beliefs/doctrines that have become popular in China, the sensible

^{11.} For the stories of the birth of the term landscape in Europe and China, see Augustin Berque, All'origine del paesaggio / At the Origin of the Landscape (Lotus, n.101, 1999) pp. 42-46.

To Recosmize Alice Pontiggia

world is in fact the materialization of Qi, the vital energy that animates everything, that permeates all beings.

In Europe, the birth of the term 'landscape' is linked to religious discussions. The monk Pelagius (360 - 422 AD) heretically argued that by ignoring divine grace, man could enjoy creation as a supreme good: a thesis dangerously close to Platonic statements. St. Augustine of Hippo opposed him, confirming instead that without grace man did not deserve salvation and that the supreme good was not creation but man himself; he therefore had to seek the truth within himself. "What do I love, when I love you? Not bodily beauty, not the gracefulness of time, not the brilliance of light, so dear to these eyes; no sweet melodies of varied songs; not the fragrance of flowers, perfumes, aromas; no manne, no honeys, not limbs dear to carnal embraces; these are not the things I love, when I love my God,"12 declared St. Augustine addressing the beauty of sensible things. This debate irreversibly separated the intelligible from the sensible, the transcendent representation of the environment to its profane, tangible dimension. Historically, the intelligible representation has been intercepted by the interest of the Catholic Church and boosted by Renaissance painting, giving birth to the neologisms landschaft—the addition of a new meaning to an already existing word in Germanic languages—and paes-aggio—the creation of a new word through a suffix in Neo-Latin languages. The sensible datum has been instead converted into the universal abstraction of nature needed to give birth to modern science. Through this separation, the rupture in the perception of the cosmos has become further underlined.

Criticizing the changes brought by late XIX century agriculture, Karl Marx established the basis of the theorization of a metabolic rift between human beings and the soil.¹³ For Marx, the human metabolism with nature is a highly dynamic, interdependent relationship. Labor is, in this relationship, the interpretation, the trajection, namely "a process by which man, through his own actions, mediates, regulates and controls the metabolism between himself and nature."14 Even lacking an integrated vision of the two, of man as part of nature, Marx's thesis reinforced the perception of a collaboration of the two in the co-creation of a collaborative relationship; one that in that historical moment was starting to show an environmental and social crisis. The introduction of new capitalist modes of production heightened the disconnection between humanity and land. Firstly, affecting soil's fertility through the use of chemical fertilizers and the industrialization of agricultural practices. And secondly, changing the form of human assemblages on the territory: under the pressure of the demand of labor force for the industries, the rural population abandoned its land in the fields and set off a migratory trend that repositioned them in the urban context. Cheated by the capitalistic dream of a "better life in cities," 15 the human individual has unconsciously found itself extracted by its evolutionary milieu to be converted into a modern subject, therefore abandoning and forgetting the ancestral knowledges related to the use of its land.

^{12.} St. Augustine of Hippo, Confessiones, X book, 400 BC approx.

^{13.} The expression and theoretical body of the metabolic rift has been formalized by John Bellamy Foster.

^{14.} Karl Marx, The Capital, 1867 (Penguin Books, 1976), Vol. 1, p. 283.

^{15.} We can recall the slogan of the 2010 Shanghai EXPO: if the English translation was promoting "better city, better life", the Chinese version was actually advertising a "better life in cities" to their citizens, or, literally "city, makes life happy." A propaganda strategy that strives for a completely different meaning.

This social dynamic, product of the MCPW, also creates a new relationship between the two previously mentioned contexts, the simplified concepts of the city and the country. This new narrative sharpens a relationship of material subjugation, in which the nonurban becomes just an inert stock of resources: not only other-than-human entities but also the human intellectual and manual labor is perceived by the urban-centered system as an unlimited and free reserve for the subsistence of the city. The non-urban is otherwise identified as a non-place accommodating the waste of the metropolis, considered and represented only by a decontextualized inflow and outflow rate diagram.¹⁶ The urban lifestyle of the modern subject is not only exalted as 'the most advanced' in its own context, but an attempt is made to sell a cunningly altered version of it back to those people who have remained in their original territories. This material relationship thus inevitably translates into cultural subjugation: the city is not only the infrastructural center, but also the center of knowledge production. As it happened with tribal societies or in post-war Matera, ¹⁷ the non-modern subject is made to feel ashamed of its lifestyle by the colonizer. The psychological bases that ensure the mechanism of reproduction of the modern lifestyle are created: the defeated, in reaction to this humiliation, cannot but present themselves as the most loval protectors and preachers of faith in modernity.

Finally, by 'tertiarizing' the idea of extraction, and therefore following the transformation of capitalism into late capitalism, the full exploitation of the idea of landscape has been reached. The cultures of non-urban contexts have been eliminated to create a tabula rasa over which their caricatured worldview, created by the colonizing imagination, can be installed. The urban machine and the modern subject enact something like an identity decontextualization: the imaginative production of a place regardless of its knowledge. Geographies that previously hosted ecological, technical and human variety are transformed into symbolically emptied amusement parks. In order to allow citizens to get their moments of leisure and relaxation, the 'fun' third of the temporal triad of dressage, the idea and practice of tourism is born and becomes widespread.

If we adopt a global perspective, we can detect an even more violent dynamic in the relationship that bonds earth and humanity in recent and contemporary histories. If the idea of the Nation State is historically based on the conquest and occupation of the land, colonialism virtualizes that same relationship by creating a human-milieu disconnection: spellbound by the idea of infinite economic growth and overwhelming political power, the Colonial Nation State abandons the care of its land and builds a fictitious subsistence above other territories that it does not know.

Towards a practice of recosmization

We can learn from the experience of the Tzeltal Mayan philosopher Juan López Intzín, who remembers finding himself in the position of a colonized subject that "it was devastating to realize that the indigenous spirit was 'defeated and subjugated." And

^{16.} Amusingly enough, the matter and energy exchange between city and country has been crystallized in a 1960s urban planning theory called *urban metabolism* (see Abel Wolman, *The metabolism of cities*, 1965).

^{17.} The Sassi neighbor of the town of Matera is a hypogeous settlement occupied since the Neolithic. In the 1950s it suffered an acute hygienic crisis that earned it the name of "the shame of Italy", mediatized as the symbol of backwardness and poverty in southern Italy. In 1952 a special law forced the eviction of the whole population.

^{18.} Juan (Xuno) López Intzín, Sp'ijilal O'tan: Knowledges or Epistemologies of the Heart. Published on Resistant Strategies website. 2019. Consulted on 2022.08.31.

that to enter the de-domestication process, it is necessary to "immerse ourselves in our history, understanding our origins as Mayan people. In this extensive present, our reflections about sp'ijilal O'tan have led us to the act of 'making our heart return' to our remote past, to our forgotten cosmos." Through the study of the Popul Vuh and the experience of daily life in his community, López Intzín began to work on a belief that unites all the pre-Hispanic peoples throughout Abya Yala: the existence of the ch'ulel in all living beings. Ch'ulel is understood as the power or vital energy (but also consciousness, soul, spirit²⁰) that all beings, human and non-human, possess; a belief similar to the Chinese Qi. Considering this, we understand that all matter lives-feelsthinks-speaks, and that there is a mutual dependence, an influence, an interconnection among it. The ch'ulel occupies the space of the O'tan. This is a term generally translated with the noun 'heart,' but that can be used to identify the subject—a being or entity that feels and thinks—or as a verb with the meaning of feeling with the heart, listening with the heart, thinking with the heart, feel-thinking: 'enhearting'. "We just have to let ourselves be surprised and re-enchanted by everything that hegemonic knowledge and the capitalist hydra have disenchanted, everything in this vast existence that has been reduced to mere objects and commodities,"21 he concludes.

Intzín therefore opens up a process of recognition of the knowledge stemming from the body. This knowledge has been historically hijacked by the dominant powers of the MCWP paradigm and understood as something that is inconvenient for their purpose, id est, the creation of an easily predictable and controllable subject. The destruction of this knowledge has been carried out over a long time-span via direct persecution, as in the case of the Inquisition, against witchcraft, but also in subtler ways—as making invisible or deleting the existence of body parts or processes. This is the case with the prostate organ that belongs to the anatomy of a female-ordered body, for example. Its existence has been obscured in society and, even more tragically, in allopathic medicine, concludes Diana J. Torres.²² But the knowledge embedded in our bodies is visible at the macro level of the tangible/nameable, as can be noted in the disappearance or alteration of body parts, and so created at the micro level of invisible components and activities. This knowledge is therefore the memory of the learning process which cells and hormones are able to incorporate through experience—the duty to face the repetition of similar conditions and the need of answering through a transformation based on choice reproduction, and not replication.²³ If we identify the body as matter, we recognize that there is information embedded in matter and that such knowledge is produced and transmitted at different scales. Moreover, if all matter embeds knowledge, the land too will have its own experience trajectory that, going past the human one, creates a biocultural diversification process and memory.²⁴

^{19.} ibid.

^{20.} ch'ulel has at least three other meanings: 1. it is the process of language acquisition by infants, 2. it is a type of consciousness or a notion of reality (for example, when a person's consciousness is in an altered state, due to substances or distraction), 3. it is collective historical memory as ways of thinking and being in the world transmitted and recreated through generations.

21. Juan (Xuno) López Intzín, ob. cit.

^{22.} Diana J. Torres, Fica Potens, Manuale sul suo potere, la sua prostata ed i suoi fluidi (Golena Edizioni, 2015) (italian translation). 23. re-pro-ducere, from latin, as "drive (v. ducere) forward (particle pro) again (prefix re)", different from re-plicare / ri-piegare, as "re-fold", "fold again".

^{24.} Victor Toledo and Narciso Barrera-Bassols, *La memoria biocultural. La importancia ecológica de las sabidurías tradicionales* (Icaria editorial, 2008).

Recognizing the violence to which the human individual, in body and spirit, has been subjected to in modern times, we can clearly identify a history of brutality in the colonies, but we can also open our understanding to the possibility of recognizing a similar story in Europe. Here, memory may not be prepared to go far enough and History may not recognize the violence neither the terms and means that have been used to execute it and get it to oblivion. Through lineages, though, the flesh and the land continue to preserve these reminiscences. Assuming that it feels equally 'devastating' for the European subject to face the recognition of subjugation and overcome the process of stripping down spiritual and material coercion, what is the way back to its heart? To what forgotten cosmos can it be directed?

If we position ourselves in the alpine valley of Valtellina, we become inhabitants who have been subjected to some form of colonialism and modernity for around 2000 (pre-Christian and pre-Roman²⁵) or 5000 (pre-Indo-European²⁶) years. During the thaw era, some 15 to 10 thousand years ago, the Alps had been a land of slow exploration for humans, which over time became a melting pot of routes and people: it is known that Celts, Romans, Spaniards, Swiss, Venetians and many others made more or less successful attempts to rule over the vital passes of Valtellina that connect the Mediterranean basin with continental Europe. In recent times, the valley became an infrastructural and cultural periphery, and at the same time a storage of resources and leisure for nearby urban territories.²⁷

Since 1986, Francesco Fedele and his team have been working on what are thought to be the oldest traces of human presence in the central Alps. They have been excavating at the Pian dei Cavalli and Borghetto localities (at the end of Valchiavenna in Sondrio Province), at 2200 meters, where temporary settlements of Paleo-Mesolithic hunters of around 9000-7500 years ago were detected. Fifteen hearths with no appearance of food (no charred bones) nor light or heating use appear to be located on two very exposed sites facing one another on the opposing summit edges of the slopes of the Febbraro valley. This suggests the hypothesis of a ritualized deer hunt and the construction of a dialogue of fire, part of a cycle of ceremonial events.

In her articles²⁸ about the Camunian²⁹ petroglyph site Naquane, Sandra Busatta tries to re-construct the mediance from which this art expression stemmed. Through linguistic, anthropological and archaeological comparison, she binds the selection of the Naquane locality, the visual and acoustic presence of Oglio river, the position of sunrise and sunset, copper and iron mines, the use of quartz, the mythological

^{25.} The arrival of Romans in Valtellina dates from around the year 23 BC. "The Romans, by creating an empire, stifled the tribal autonomies, for which they suppressed the different." Emmanuel Anati, *Le prime comunità umane in Valtellina* in *Le origini della Valtellina e della Valchiavenna*, 1989.

^{26.} The arrival of Indo-Europeans in Valtellina dates from around 3200 BC. For Emanuel Anati and Marija Gimbutas alike, Indo-Europeans were a colonizing society. Bearers of a new religion for the former, of military and patriarchal ideology for the latter..

^{27.} It is worthwhile mentioning the importance of non-urban contexts in energy production and city's commodities development. Specifically, Valtellina water produce the 12% of the national hydroelectric energy (Alta Rezia News, 10/05/2021), that in late XIXc. has been the *conditio sine qua non* for the construction of the Milanese public tramline.

^{28.} Sandra Busatta, L'arte rupestre camuna tra Cervi, Caccia Selvaggia, Aquane e Nani minatori, 2019

^{29.} Ancient Camuni were the prehistoric population of Val Camonica, the valley that connects to Valtellina through the Aprica pass. They left a great legacy of rock art, spanning from Neolithic to Middle Age.

figure of the Aquane,³⁰ the presence of deer and other elements, to give us an approximate perception of Camunian cosmology. "Using the word 'thing' in the broadest way, I translated every 'thing' into a phoneme, the smallest phonetic unit in a language that is capable of conveying a distinction in meaning, and looked for meaningful combinations. How did these landscape/mindscape phonemes combine into words, that is into clusters of meaning? As soon as I could recognize 'words', I started to see meaningful sentences and, at last, to understand the grammar of the Camunian landscape."³¹ Through this methodology, Busatta offers her interpretation of petroglyphs as funeral ceremonies with passages to "other worlds" and ritual activities around death, recalling the hypothesis of a Proto-Indo-European shamanism.

MCWP triggered what is nowadays called the Sixth Extinction of life on Earth, which broke the social bond and wreaked havoc with the landscape. It entailed a loss of cosmicity which may well be fatal for humankind. "This means that, contrary to that decosmization, in order to ensure sustainability, we have to recosmize, reconcretize, re-Earthbind human existence; and this is precisely the aim of mesology."³²

Von Uexküll's functional cycles are altered by the matrix of power, in Quijano's words.³³ But acknowledging the awareness brought by the indigenous³⁴ communities, the people of the fields, and by "Mnemosine of a thousand names," we see that in modern society, a shift in the perception of land is needed. Modern collectivities should reconsider their relationship with the territory in terms of natural flourishing, and not possible consumption. Land as life, not land as profit.

Once the ruptures have been detected and the damages have been identified, how can we deal with the legacy of the Modern Colonial-Capitalist Western-White Patriarchal-Paradigm? And, if we survive and are healed from it, how can we create alternatives? Can the understanding of past mediances help contemporary autochthonous collectivities to regenerate their cosmos? If we want to implement a counter-strategy to modern dressage, we need to subtract the modern individual from being an exploited, alienated, secular, algorithm-driven consumer so it can engage with its environment through its senses—reclaiming its humanity³⁵ in a process of recosmization with its own milieu.

^{30.} Also called Aguane, Enguane, Eguane, Agane, Gane, Sagane, Aivane, Vivane or Valdane; Adganae for the Celts, Longane for Venetians. Similar to sirens and forest nymphs, they recall the figure of Melusina, demigoddess of waters, whose cult was widespread in pre-Christian Europe. She was sometimes replaced by the Roman Minerva.

^{31.} Sandra Busatta, The Grammar of the Camunian Land/Mindscape, 2021, commissioned text.

^{32.} Augustin Berque, op. cit., p. 9.

^{33.} Aníbal Quijano, *Colonialidad del poder, cultura y conocimiento en América Latina* (Anuario Mariateguiano 9, 1997), pp. 113-21. 34. indi-genus, from latin *indu/in*- (prefix locative particle)= inside + *genus* (verb gìgnere)= generate. Or autochthonous, from the late Latin *autochton* which derives from greek *autókhthōn* = 'of its own land'.

^{35.} Humanity here understood as the word for the general form taken by the Subject, i. e. a living being with consciousness and intentionality (Eduardo Viveiros de Castro, *Cosmological Deixis and Amerindian Perspectivism*, in The Journal of the Royal Anthropological Institute, Vol. 4, No. 3, 1998, pp. 469- 488).