

Adolf Portmann: the expressive function of technique

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ABSTRACT

This essay focuses on the topic of technique in the thought of the well-known biologist, zoologist and anthropologist Adolf Portmann (1897-1982). First of all I'll try to understand the biological and anthropological roots, that make a naturally-artificial (namely technical) being of a man. Then I'll examine what kind of role and weight Portmann assigns to the technique, underlining risks and chances, closely linked to it, and showing the essentially expressive and self-expressive function of it. Finally I'll specify the relationship between the development of technique in our society and the loss of the primary world: the aesthetic world of imagination.

KEYWORDS

Self-presentation, isomorphism, ego-inflation, biotechnology

1. Biology as a technical world power

It is natural for technique and its unexpected development to determine a natural form of resistance in man. Just as it is natural for such resistance to be overpowered, sooner or later. Francesco Petrarca calls Adolf Portmann (1897-1982)¹ to our mind. He was highly critical of firearms and their sudden diffusion, but this is not the reason why they did not become popular in Europe.

According to the famous Swiss biologist, zoologist and anthropologist, technique, in its varied forms and endless applications, is ingrained in man and has somehow accompanied him since the beginning of his existence. Biotechnology is an example of this: the fermentation processes for the preparation of bread, alcoholic fermentation as a stupeficient instrument, contraceptive methods, the cultivation of plants starting from the wild ones, the breeding of animals starting from the wild ones all represent original practices of biotechnology, that are as old as man². Of course, in the XX°

¹ Adolf Portmann, *Biologie als technische Weltmacht*, in *Entläßt die Natur den Menschen?*, Piper, München 1970, pg. 365.

² Ibidem, pgs. 364-365; Adolf Portmann, *Wir sind unterwegs. Der Mensch in seiner Umwelt*, Walter, Olten-Freiburg i.B. 1973, pgs. 36-41.

century we have been witness to a real revolution in the field of biochemistry and biophysics, whose potential and risks were already before the eyes of the author in the 70s; so much that, somehow, biology today seems to be the field for technical application par excellence – all the more so after the recent breakthroughs in the field of genetics. The ability to create organic tissues, to imitate processes of the metabolism, to synthesize new substances; the possibility for in vitro fertilization, for artificial insemination, for the cultivation of ovules outside the mother's womb, etc. these imposing applications make biology in the 1900s seem like the most advanced technique³.

Therefore it becomes a must to ask whether or not to support or obstruct such pressing development. This would immediately lead us to cope with the thorny and current problems of genetic manipulation, of the limits of intervention by researchers, etc. Instead, following Portmann, we will try to understand, as a first step, the biological and anthropological roots that make a naturally artificial, that is technical, being out of man. Secondly, we will try to grasp the intrinsically phobic and insane that can coexist with the essence itself of technique.

2. *Opaqueness and transparency as the origin of technique*

From a biological point of view, we think the crucial passage consists in the progressive loss of body transparency by complex living beings. In the elementary forms of life, in fact, “transparency of organisms is an essential part of their way of revealing themselves⁴”. Sea molluscs, for instance, are often transparent, semitransparent or opalescent, which implies perfect correspondence between internal conformation and external structure. There is nothing in them that is concealed or that wishes to be concealed and communication with the outside occurs in an immediate manner, precisely that of transparency. The animal is exactly as it looks, the inside is already outside, and the only function body surface has is that of disappearing, allowing what that boundary surrounds to be seen: the inside and the outside are one whole. When this transparency survives in superior animals, the organs in the metabolism, the viscera – by nature asymmetrical – are compressed inside an iridescent casing, called *nucleus vegetativus*; the rest of

³ Adolf Portmann, *Biologie als technische Weltmacht*, cited, pg. 366.

⁴ Adolf Portmann, *La vita come rapporto preordinato*, in *Le forme viventi. Nuove prospettive della biologia*, Adelphi, Milano 1989, pg. 22.

the body, instead, dilates, expands, taking on rigorous bilateral symmetry⁵. In other words, it is as if that which escapes symmetry by nature, were confined within a coloured wrapping, inaccessible to the eye.

The increasing complexity of animal organization, however, leads to an internal/external separation that is more and more obvious and considerable: optical transparency withdraws progressively in an opaque structure of the surface⁶. The opaque surface becomes an organ in every respect, whose purpose is not only to protect the inside and allow exchange with the outside, but also to express the interiority, to mediate it – through patterns and chromatic ornaments, sounds, olfactory emanation, movements, actions. In other words, an opposition between the inside and the outside is outlined, marking the birth, in every respect, of a bi-dimensional system “largely independent of the structures inside⁷“, and favouring the formation of a central nervous system. Such a central position allows introduction of the animal into the world to take place under the form of mediation, so that the interiority (a combination of activities that is correlated to the environment) uses the external aspect of the organism more and more often.

The external part, now separated from the internal one, implies the birth of an elementary form of interiority. The whole organism develops indirect techniques of communication, of self-presentation, through which it ‘learns’ to communicate symbolically with the outside, through colours, ornaments, patterns, words, etc. Opaqueness first, allows a form of concealment and thus an early form of non-identification with the inner self: it allows the organism both to reveal and to conceal itself, both to flatten itself and express the internal functionality, and to provide a free version of the self, a demonstrative one⁸.

The unity of life, somehow divided, opens a world of infinite possibilities. The appearance of opaqueness, in fact, confines that which is vital and indispensable to survival, inside a hidden and asymmetrical world, while the external surface – symmetrical and bilateral – somehow seems to free itself from that which is lacking functionality: “the external aspect [das Äußere] becomes a field for expression which is used for representation and

⁵ Ibidem.

⁶ Adolf Portmann, *Um eine basale Anthropologie*, in *Biologie und Geist*, Herder, Freiburg-Basel-Wien 1963, pg. 240.

⁷ Adolf Portmann, *Le forme viventi*, cited, pg. 24.

⁸ Compare: Adolf Portmann, *Um eine basale Anthropologie*, cited, pg. 244: “If one observes the living activities in all their richness, then even ways of behaving obtain a significance, that cannot be inserted directly in the simple cycle of conservation, but that, for instance, are the expression of an atmosphere; therefore they do not have any marking value, but a value of representation”. (All German translations are by Oreste Tolone).

disclosure, and is clearly distinct from the conservation apparatus⁹“. The employment, then, of a surface so extended as that of the external one, for communication purposes, supplies the living being with dynamism and power, that are far superior to the previous levels; the relationship among organisms is richer and richer and the sphere of relational nature expands, allowing the foundation of a real sociable life.

3. Conservation and self-presentation

Therefore, according to Portmann, as a fundamental effect, this important morphological change results in the division of fields: in the more complex organizations, the inside is assigned to conservation, to the realization of vital functions, allowing the outside to be an expressive field, a place assigned to expression. In other words, it is as if, at a certain point of organic evolution, it became fundamental to guarantee the survival of organisms, the continuation of life, but also, or especially, for life to represent itself, displaying itself in all its superabundance of forms, in its euphoria and complexity, thus favouring communication among organisms. Self-presentation (*Selbstdarstellung*) and self-growth (*Selbststeigerung*)¹⁰ become a central objective of life: the structure of representation goes beyond the structure of conservation! As a result, communicative and social dimension of the animal, seems essentially hyperthelic (*hypertelisch*) in the eyes of Portmann, and lacking function (*funktionslos*)¹¹, therefore *somehow detached from the conservation of the individual*.

In brief, the bi-dimensional nature linked to opaqueness of the surface and thus to the birth of interiority and of conscience, allows the appearance of a superior form of life, yes, characterized by an impulse toward conservation, but also by the need to express itself and to communicate indirectly with a world, with which, since the beginning, it has been connected by sympathy.

It follows that such a separation goes at the same rate as the increasingly clear distinction between functional structures and aesthetic-representative structures. It is within this context, biological and of aesthetic function,

⁹ Ibidem, pg. 240. The quotation continues as follows: “The formal development of these possibilities exceeds, with an increasing level of organization, the elementary necessities of conservation, both in the olfactory and in the optical and acoustic scopes, in favour of a demonstrative role”.

¹⁰ Ibidem, pg. 238; compare: Joachim Fischer, *Philosophische Anthropologie. Eine Denkrichtung des 20. Jahrhunderts*, Alber, Freiburg-München 2008, pg. 197-205.

¹¹ Adolf Portmann, *Um eine basale Anthropologie*, cited, pg. 238.

which is excellent in superior animals that the phenomenon of technique, as it appears in man, is to be interpreted and inserted.

4. *The expressive character of technique*

Naturally man possesses a more complex expressive ability. In man alone, really, can we speak of interiority, reflexivity, and conscience; only in man is the primary supra-individual structure – of which sociality is a sign – realized in a way that is free and not pre-arranged. In fact, though man is considered as part of a vital unit, he has an anthropological specificity: he is in his essence “historical”¹². In line with the assumptions of philosophical anthropology (of Scheler and Plessner, more than of Gehlen)¹³, Portmann believes that, being man open to the world, (*weltoffen*), the weight of instincts and of inherited natural drives flows in a free and multiform way, and not according to a rigid and pre-arranged order. “The scarce instinctive fixation of most instincts is a human characteristic”¹⁴. This means that “the forms through which human groups order natural instinctive data, are with no exception “artificial”¹⁵; drives are natural, but the social forms with which it is attempted to fix them, to tame them, are linked to their own time. Therefore, the need for a choice, for a decision that governs and determines form, that binds impulses and guides them, is peculiar to man: “natural instincts are given to us in a timeless way as much as all the forms, and all the social forms through which we attempt, from generation to generation, to block these instinctive forces, to tame them are bound in a temporal way”¹⁶. So both, acts linked directly to survival and expressive acts, fall within the scope of decision, representing, that is, artificial and creative ways to meet natural needs, freely, historically and in a flexible way. However – and here lies the core of the question – it is necessary to look at the concept of *Selbstdarstellung* in a broader sense: “Not only the voice, the gestures, are at the service of this representative function, but also the whole technique of man. It is, from the beginning, more than the balancing of a shortage, it is more than simple compensation of organic deficiencies, it is not just a replacement of absent somatic organs by intellectual works, but

¹² Adolf Portmann, *Im Kampf um das Menschenbild*, in *Biologie und Geist*, cited, pg. 268.

¹³ Compare: Adolf Portmann, *Der Mensch – ein Mängelwesen?*, in *Entlässt die Natur den Menschen?* cited, pgs. 200-209.

¹⁴ Adolf Portmann, *Im Kampf um das Menschenbild*, in *Biologie und Geist*, cited, pg. 268.

¹⁵ *Ibidem*, pgs. 268-269.

¹⁶ *Ibidem*, pg. 270.

still, also the going beyond the organ, in which the impulse to self-growth is expressed in an imminent way as element of the human representative function”¹⁷. In other words, even today’s technique is expressive in man, though it may seem like a pure instrument for survival, but it is actually a demonstrative dimension of man.

This, according to Portmann, implies a reconsideration of the idea of technique. It cannot be understood in its real nature if it is not intended as a means of expansion and presentation of oneself. Like in the elementary organic levels, even in man interiority and reflexivity – on which the possibility of technique is founded – have a very important representative function. Technique, even in its more advanced forms, as they emerged in the XX^o century, cannot be explained without underlining its substantial aesthetic-expressive character. It is not just a way to compensate for weaknesses (Gehlen), nor an instrument of economy (Marx); on the contrary, in technique emerges the exuberance of nature, its will to communicate by multiplying forms of life and their visible aspects, that is, self-presentation. Not just optical, olfactory, etc. characters, but also the movements, the actions, the conscious expressions, are part of this impulse toward self-presentation. So, using the words of our author again, “He who fights against the roar of a motorcycle rider, will soon realise that this noise certainly does not represent, for those who travel, trouble that is hard to avoid, but rather the acoustic manifestation of the rider, the self-growth of this individual, the greatest expansion of his individual or group sphere. If, therefore, technique is to be judged in human existence, then it cannot occur in the perspective according to which man is a deficient being (*Mängelwesen*), who compensates his weaknesses, or from the prevailing idea that economical relationships are the central, driving moment of social life. It is up to fundamental research to see the often neglected role of technique, as a means for self-presentation of man and of human groups, in its amplitude, and by that, to understand the demon of technical production in its significance¹⁸”.

5. Theoretical function and hypertrophy of the self

Well, technique, in its double value – of self-presentation and conservation – pursues, as its only objective, introduction of the organism within a historical and natural whole, one feels part of, to survive in, to communicate

¹⁷ Adolf Portmann, *Um eine basale Anthropologie*, in *Biologie und Geist*, cited, pg. 238.

¹⁸ *Ibidem*, pgs. 238-239.

with, on the basis of an original sympathy. However, according to Portmann, throughout the centuries, the scientific and industrialized West has laid stress exclusively on the instrumental function of the intellect. Between the XII^o and the XVI^o centuries, a kind of decision was made in favour of the theoretical¹⁹, quantitative and qualitative which led, in actual fact, to a real supremacy of the method. It is the technique of Bacon that helps us to live and introduce man inside the world in the best of ways, by modifying him and manipulating him. The West renounced to the unity of natural life staking everything on control over the world through the research method²⁰, sacrificing the aesthetic function to the advantage of the theoretical one. The theoretical function is the active one that uses the means of rational thought, the possibilities of scientific analysis, the instruments of mathematics: in the change to a technical rational type of thought, what occurred was, so to speak, a ‘mutation’²¹.

No moralistic judgement or worse, obscurantism is visible in this, on the part of our author, as the consciousness of absolutization, which is detrimental to the unit and the fullness of human life. “The unpredictable increase of conscious life, of the functions of the Self, which results from rational research and an inevitable destiny. However, this destiny will lead to a completely diseased human being, to unilateral hypertrophy of the Ich-Position”²². The risk is considerably obvious when such hypertrophy of the self pours not only in the surrounding world, but also in man himself. Manipulation, in its differing forms, therefore takes on the character of a threatening destiny. In the background, obviously, innumerable problems raised from new acquisitions in the field of genetics.

Though its reflections date back to the 70s at the most, Portmann is already well aware of how the rapid progress of biology is accompanied by destruction of western ethics, as it was intended in modernity²³. The great development of natural sciences, child of hypertrophy of the self, can involve misuse and unpredictable consequences. The possibilities of intervention in the genetic inheritance of future generations, the risk – more than dreaded by Sloterdijk²⁴ – of human breeding, genetic planning of human variants,

¹⁹ Adolf Portmann, *Biologisches zur Ästhetischen Erziehung*, in *Biologie und Geist*, cited, pg. 250.

²⁰ Ibidem.

²¹ Adolf Portmann, *Der Mensch in Bereich der Planung*, in *Entlässt die Natur den Menschen?* cited, pg. 355.

²² Adolf Portmann, *Biologisches zur Ästhetischen Erziehung*, in *Biologie und Geist*, cited, pg. 258.

²³ Recuperando la posizione del Nobel Francis Crick.

²⁴ Compare: Peter Sloterdijk, *Regole per il parco umano*, in *Non siamo ancora stati salvati*, Bompiani, Milan 2004, pgs. 241-261.

unable to decide on their being, artificial insemination, the implanting of ovules in environments that are different from the maternal one, selection of the biological inheritance to be inherited etc.: with the diffusion of technique, and by means of these operations, man, today, can be planned and modified in the same way as the world. We are the ones, today, who are threatening other forms of life, including ourselves. It is true, however, that manipulation is a structural phenomenon of man-being²⁵. The temptation to plan man has always existed; just think of the social custom of selecting a partner, of hostility towards foreigners, of man, of the claiming of presumed superiority of the white race, etc.²⁶ What is new is the application of “more and more knowledge at the service of planning – the increasing role of science. What is also new is the rapid change in human vital space, the transformation of the earth into a space of technical structure”²⁷. Evolution of the living being, today, is in our hands.

6. *Recovery of the aesthetic function*

Therefore, the real danger consists in the drying up of rationality, reduced to instrumental rationality and deprived of its close connection with imagination and fantasy, that is, the expressive function; all this leads to a form of disenchantment of the world. The world, scanned from theoretical rationality, essentially reduced to inert and inanimate matter²⁸, lends itself to immediate technical use. The essential object becomes finding the best means for changing the world: the “compulsion to the new”²⁹ is what guides the action of modern biology laboratories. Instead, it is necessary to recover the integrity of being man, reconciling rational thought and imagination, theoretical and aesthetical function. What Portmann hopes for is a man, in whom hypertrophy of the intellect alone does not determine the image of the world³⁰. But what does ‘recovering the aesthetic function and giving space to the imagination’ mean, then?

The progressive achievement of the “secondary world”, that is, of calculating rationality, has been occurring more and more to the detriment

²⁵ Adolf Portmann, *Manipulation des Menschen als Schicksal und Bedrohung*, in *Entlässt die Natur den Menschen?* cited, pgs. 215-229.

²⁶ Adolf Portmann, *Der Mensch in Bereich der Planung*, cited, pg. 343.

²⁷ *Ibidem*, pg. 344.

²⁸ Il riferimento è evidentemente a Jonas; compare: Hans Jonas, *Organismo e libertà. Verso una biologia filosofica*, Einaudi, Torino 1999, pgs. 15-35.

²⁹ Adolf Portmann, *Le forme viventi*, cited, pg. 12.

³⁰ Adolf Portmann, *Der Mensch in Bereich der Planung*, cited, pg. 357.

of what he defines as the primary world. The “primary world” is that in which man finds a configuration of the world thanks to a primary imaginative spiritual activity; it is the one to which he relates, to what cannot be measured, by means of a thought in images: the analogy, poetry, art, etc. In other words, it is as if man had a mysterious intuition³¹, an original glance at the world in its expressiveness, not a pre-scientific glance, but an a-scientific one, capable of grasping the unity of the whole, of communicating with it.

It is the duty of society, but in the same way, of the scientific community, to prevent one of the two sources from drying up, or worse, being regarded as superfluous or harmful. It is to avoid – just to use an expression by Portmann, vaguely recalling activists in the 1968 protest movement – atrophy of the imagination and of fantasy in favour of reason.

In the meeting with the world, it is necessary to pursue a *Savoir par coeur*, a loving acquaintance with things, colours, the external world³². Especially there, where rational thought reaches the limit of its possibilities, where it seems to have reached the boundaries of the knowable, there is a transformation: “unobserved, the imaginative function takes the initiative, prevails, and continues to write the text its way, with its language, in the expressive form of images”³³. In fact, being our language the expression of human life in its wholeness, it contains much more than the rational function; it is the representation that leads man beyond the reality that can be grasped objectively. It allows us to sense around us a world that is less obvious, it creates unpredictable connections between things: “language not only thinks for us rationally, but it dreams in us. In this going beyond reality by means of spiritual creative forces, the power of that particular way of experimenting the world, which we called imaginative, is expressed”³⁴.

In this aesthetic type of linguistic impulse, in this *elan vital*, comes to the light the archaic, primordial image of the “maternal foundation”, the mythical image of maternal and creative nature³⁵, in whose womb it is supposed that all protagonists are inserted in pre-arranged relationships.

The case of Icarus can be of emblematic example. The primitive desire to fly is obviously the expression of that imaginative way of having experiences, in contrast with the rational one; the legend of Icarus, however, also originates from the technical-intellectual power, from the waking dream

³¹ Ibidem.

³² Adolf Portmann, *Biologisches zur Ästhetischen Erziehung*, cited, pg. 259.

³³ Adolf Portmann, *Mythisches in der Naturforschung*, in *Biologie und Geist*, cited, pg. 88.

³⁴ Ibidem, pg. 97.

³⁵ Ibidem, p. 88.

that becomes scientific rationalization. And if the analogy man-bird is technically misleading from a scientific point of view – think of the first disastrous attempts to fly by imitation – but it acts as a spur. The history of scientific research is full of battles against the mythical component. Not only is this wrong from the epistemological point of view, but it is also harmful for the harmonious spiritual formation. In fact, those who think this way “forget that, everywhere, in the most precise fields of research, real productive thought itself needs intuitive and spontaneous work of creation, and therefore of aesthetic function; they forget that dreaming and waking dream, as every experience of the senses, opens inestimable possibilities”³⁶. Rational thought and thought by images represent two substantial ways of being of man³⁷.

7. Isomorphism of the world

Thus, man is able to become part of reality, to elaborate intuitively a consistent and harmonic image of the world, where full correspondence among all living beings seems to exist, only if he puts an end to contemporary atrophy of the imagination and hypertrophy of the self, which established itself in the age of technique. Only recourse to aesthetic and imaginative intuition of the surrounding world, only the recovery of attention to self-expressiveness of nature – and of man in nature – will help man to understand the intimate consonance existing among creatures, the intimate harmony of the parts, with moderative effect on the arrogance of reason.

Pollination, for instance, assumes that the flower is seen by the butterfly and that the scent is perceived; the chromatic shades of living beings assume the appearance of sentient eyes, or anyway of sight organs for which to appear: it is as if there were a correspondence between an innate structure, present in the interiority of the organism, and reality. It is as if the way of being of two distinct organisms acted according to a pre-established harmony, or better, as if it merged into one super-individual entity³⁸. The birds orienting themselves – in the migration period – with the constellations, assumes that the interiority of the animal had been

³⁶ Adolf Portmann, *Biologisches zur Ästhetischen Erziehung*, cited, pg. 255.

³⁷ “These two ways of having experience [that is, imagination and rational thought] are in a polar opposition” (Adolf Portmann, *Mythisches in der Naturforschung*, in *Biologie und Geist*, cited, pg. 86).

³⁸ Adolf Portmann, *L'interpretazione come problema biologico*, in *Le forme viventi*, cited, pg. 82.

connected, since the beginning, to the vision of the firmament. It is as if, Kant would say, there were a sense, an object, to which all contribute. Wolfgang Koehler calls such intimate “isomorphism”³⁹.

Even in the human experience of the world there are isomorphic elements, such as the appearance of a smile in a newborn child and the model of the human face⁴⁰. However, in man it is difficult to distinguish between what is nature and what is culture; as man is an open and premature being⁴¹, even the innate structures become consolidated culturally during the first year; thus the social world becomes a decisive factor, even in the formation of those innate isomorphic correspondences. Like the bird, man too has unconscious forces, aimed at dominating the world; but his task is that of breaking this archaic, Ptolemaic vision of the world; orientation in the world, is no longer innate in him, but it is the task of reason. These two ways of being – of the bird and of man - “originate from secluded sources of life, from forces that realize this life in its varied forms and to which both migration of the warblers and our most ambitious space projects must trace back”⁴².

However, the deep spiritual dissatisfaction linked to western civilization – that of space projects, precisely – conceals the *nostalgia of an aesthetic approach* to life, it hides the need to unhinge the tyranny of theoretical reason. This does not mean so much, as Portmann underlines, to educate to become artists or things of this sort, as rather to recover an aesthetic communication with the world⁴³.

To observe the world in an aesthetic way means, therefore, to grasp the expressive, self-representative value and thus to feel as part of a whole that addresses me and which I am a part of. Super-individuality, peculiar to organic expressiveness, prevents man from transforming everything into being, allowing him to sense the unity of the whole, appealing to the forces of imagination.

The man, who is open to the world, imagines his future and realizes it rationally. Aesthetic and theoretical function and primary and secondary world, are thus obliged to proceed in unison.

³⁹ Adolf Portmann, *Mythisches in der Naturforschung*, in *Biologie und Geist*, cited, pg. 101.

⁴⁰ Ibidem, pg. 104.

⁴¹ Compare: Adolf Portmann, *Zoologie und das neue Bild des Menschen*, Rowohlt, Basel 1951.

⁴² Adolf Portmann, *L'interpretazione come problema biologico*, cited, pgs. 112-113.

⁴³ What the present demands, in fact, is “mobilization of all the spiritual forces that would be suitable for recreating balance in man, that would be suitable for the forming of a man, no longer intellectual, but happy” (Adolf Portmann, *Biologisches zur Ästhetischen Erziehung*, cited, pg. 259.)

8. *Techno mania and technophobia*

The use of an engineering technique applied to the transformation of man thus finds, in Portmann, a determined opponent. This may lead us to ask whether there is, in him, after all, a “phobia” towards technique. The resistances that we find in his works, at times, appear to be an actual refusal, and the feeling that there is an impediment a priori may be legitimate. With respect to the complexity of the problem of transformation of man, and to the scarce global vision of the effects that our interventions may involve, one must wonder whether man, in his current form, represents a persistent, stable rule or whether the way to metamorphosis of man is open. No less than the current debate on the post-human and hybridization⁴⁴. Well, faced with this great challenge, Portmann moves cautiously, tending to underline more the connate risks related to such a turn than its intrinsic potentialities, embracing a sort of *heuristics of fear*. Unlike Hans Jonas⁴⁵, though, what stands out is fear of the violation of dignity of man, of the inhuman, more than fear of destruction of the planet. He moves according to a *principle of caution*. Biological progress proceeds much more rapidly than our capacity of adapting to social changes; which means that man in his ethical and social dimension does not measure up to the possible changes, or better, does not keep pace with the technical transformations⁴⁶. Political and social backwardness keep the right decisions from being made in the proper time. Moreover “the time needed for the real transformation of organisms, definitely goes beyond the lapse of time that our intellect can dominate with the glance, and more than ever beyond the lapse of time in which the swinging conduct of man can carry out resulting interpretative processes”⁴⁷. This means that, without the sufficient anticipatory capacity, and with the inevitable social resistance to radical and ungovernable changes, it is necessary to cautiously keep to the rules of man in his current form. Natural

⁴⁴ For a broad picture of the contemporary debate and an exhaustive bibliography, see Roberto Marchesini, *Post-human. Verso nuovi modelli di esistenza*, Bollati Boringhieri, Torino 2005.

⁴⁵ Compare: Hans Jonas, *Il principio responsabilità. Un'etica per la civiltà tecnologica*, Einaudi, Torino 1993.

⁴⁶ Adolf Portmann, *Biologie als technische Weltmacht*, cited, pg. 378.

⁴⁷ “With respect to the complexity of our current form of life and with respect to the fact that we only grasp the problem of transformation of man partially, we must – it seems to me – conserve this rule much longer” (ibidem, pg. 377).

evolution will proceed in the societies as well, in a slow and unrelenting way, as always, exceeding by far our reassuring glance. Therefore, “hands off a form of life that we have not created ourselves”⁴⁸. To avoid a “catastrophe”, it is necessary to “restrain” the powers that can annihilate the supreme forms of nature. Nor, yet, is it useful to take risks down impassable, unpredictable slopes when science is given more pressing and urgent tasks: “future bio-technique has enough saving tasks: to help in the preservation of nature around us, to relieve the real suffering of man”⁴⁹.

Portmann invokes caution. Because man is able to intervene in development and in human and environmental evolution, in a lasting way; because he has the strength to create effects that survive his own existence, and that only man in the historical succession can examine; because the human eye is too limited and short-sighted to expect to start processes that only others will be asked to inspect and perhaps suffer: for all these reasons man has no right to intervene in situations where the outcome and development do not appear certain. Unlike Teilhard de Chardin, who sees in liberty the human instrument for continuing the evolution of nature⁵⁰, Portmann – denoting a certain underlying – narrows the scope of intervention of human liberty, so to speak, to ecology and the care of man.

In our opinion, and to conclude, Adolf Portmann redefines the sense of human technique, conceiving it as the extreme development of that process which – from the appearance of the opaque surface on – has created a bi-dimensional nature in the living world. With the appearance of opposition between inside and outside, this nature represents the first form of non-transparency, and therefore of mediacy, from which the central nervous system and reflexivity are born. From this moment, expressiveness in its different forms – conscious and unconscious, functional and non-functional – takes on the value of a technique⁵¹, an instrument of manifestation.

Such a dilatation of technique can most get closer, in Portmann, to a techno mania, in the sense that every self-presentation, is a form of technique, a way nature expresses itself. This involves an equalization of cultural techniques to natural ones, to the extent that they both originate from the same ineradicable need for expressiveness. Even technical, functional and manipulative actions always have, in some way, an expressive aim; they express the living being that performs them.

⁴⁸ Ibidem, pg. 378.

⁴⁹ Ibidem, pg. 379.

⁵⁰ For a comparison with the thought of Teilhard de Chardin, see Adolf Portmann, *Der Pfeil des Humanen. Über Pierre Teilhard de Chardin*, Alber, Freiburg-München 1960.

⁵¹ Adolf Portmann, *Um eine basale Anthropologie*, cited, pg. 244.

Man, however, can use his conscious technique not just to enter the game of natural expressiveness, but also to interrupt isomorphism, to exit the game of correspondence with other living beings of the cosmos, expressing himself in the power of rationality. Hypertrophy of the self, invasion of the quantitative, are a way to express mutilation of a subject who is trying to do without his other half, who censors communication with the cosmos in return for control. But the drift he gets lost in originates exactly from forgetfulness of the firmament, with which he no longer is familiar, from coldness and from silence in the surrounding world, with which he has interrupted all communication. In this case technique becomes phobic, something to be afraid of, the emblem of a self-referential expressiveness, which does not seem to pay attention any longer to that symbolic world, of which he too is part, as a living being.