



## When Concepts Trump Percepts: How Our Visions On The Body Are Changing In The Transition From The Analogic/Televised To The Digital/Reticular Era

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### KEYWORDS

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### ABSTRACT

*The author considers different clues permitting to understand what could happen to our visions on the body in this transitional era. We are in fact passing from an analogic/televised era, in which biopolitics dominated the scenario and the bodies were under control, to the digital/reticular era, in which the control, according to some thinkers, could be exerted on emotions (psychopolitics will be for them the next form of control). Some aspects related to the odiern trends in politics are considered, particularly those influencing the incredible flux of information surrounding us, with impact on our bodies and minds. The role of cognitive sciences in coping with the transition is sketched, together with clues coming from sport, that is the trendiest human activity permitting a better understanding of the new perspectives offered to our bodies in terms of inclusion of "alterity" in them. This not only in terms of devices, but also molecules, thanks to the new techniques, belonging to both genetics, nano and bio technologies, and robotics.*

### Introduction

The present paper is not an empirically based article: its focus regards how our visions on the body that are changing in this historical period that is considered as being strongly transitional. For Niola (2017), in fact, we are passing through the so called post-truth era, in which reason will be substituted by emotions, supported by technological reproducibility: a paradox due to permanent connection. The final era will be that of emotion:

*Dominated by social media that substitute objectivity with the opinion, the reliability of the source with the fascination of the testament, the authority of the explanation with the fascination of the storytelling. It happens when the emotional impact of the narrative is stronger than the quality of the reasoning and of the evidence validity: information tends to inexorably stray towards fiction" (Niola 2017:23).*

And this happens everytime pseudo-communication is believed to be information, even if, somehow, communication is the opposite of information. In recent years I focused my attention on the emerging trends in the study of the body (Viviani, 2010) and on some aspects of its mental representation (Viviani & Locati, 2013), in virtue of the complexity of the conceptions and knowledge that we have on it, something hard to be included in simple schemes. The body is difficult to define (and in fact it is often assimilated to complex systems) and impossible to be recreated in order to understand it, so artificial intelligence tries to surrogate, generating structures and functions that can adhere to the biological reality. This is a strong clue signaling the transition. Because more and

more sophisticated rules (programs) and procedures (algorithms) are conceived every day, they may anticipate the future when, thanks to the convergence of new technologies (the so called *nano-bio-socio-cogno-techno convergence* - Spohrer & Engelbarth, 2004) we will incorporate inside our bodies devices and molecules able not only to restore human capabilities to the disabled or dysfunctional, but also to enhance our performances (Canton, 2004). In a close future, whether we want to or not, we will be obliged to accept “alterity” in our bodies. We will create the H+. The first time I saw the sign H+ was in 2009, inside an article of Stix, who explained the symbol in this way: “H+ is the code sign used by some futurists to denote an enhanced version of humanity. The plus version of human race would deploy a mix of advanced technologies, including stem cells, robotics, cognition enhancing drugs, and the like, to overcome basic and physical limitations” (Stix, 2009:28). The process will start outside our bodies, to be little by little included in them. For example, knowledge about our brains could derive from “organoids”, brain structures that are at present created growing the largest part of the developing brain in a laboratory dish (Knoblich, 2017). In a future it will be possible not only to use the findings of these experiments, but also to include them in our bodies. Of course they are creating unexpected ethical problems (Purnell, 2017). The development of robotics, with brain-inspired intelligent robots, will create “robanoids”, able to have a brain-like control (Oberts & Sanders, 2016). At present the so called “soft” robotics uses soft materials and special techniques permitting to create deformable structures that give robots the ability to stretch, squash, climb, and morph, with the potential for biodegradability and self-healing (Laschi *et al.*, 2016). Zajka (2017), reports a robotic device with material properties close to those of native heart tissue. Zhao *et al.* (2016) presented a prosthetic hand furnished of stretchable optical waveguides: a good example of embodiment. Soekadar *et al.* (2016) showed how an exoskeleton can restore intuitive control of grasping motions for quadriplegia patients, permitting them to restore basic daily activities. Chin *et al.* (2017), thanks to nanotechnologies, invented microgels that act as implantable nanodevices that can solve problems like biocompatibility and can be controlled after implantation. In short, today we are amplifying beyond measure the fundamental paradigm shift that moved a lot of societies from the age of industry to that of information. Information technology permits to identify, organize, store and manipulate data. As previously said, we are therefore facing a transitional era whose boundaries are however unclear: if we consider the media, we are in fact shifting from a televised/analogical era to a digital/reticular one, that will change completely the way in which humankind is interfacing with the world. This could create a lot of problems, but the main will regard people, as echoed by Umberto Eco (2015) during the conferment of an honoris causa degree: “Television promoted the everybody’s fool against which the spectator, who believed to be superior. Internet drama is due to the fact that it promoted the everybody’s fool as truth taker: Internet gave the right to speak to legions of morons”. Thanks to the digital world we could create more participative societies, but also increase social controls. We are more and more device dependents, so much for the networks of users, the sensation could be to be “alone together” (Turkle, 2011). Social participation includes both personal adhesion and involuntary acceptance, for example when privacy is violated by data surveillance (Schneier, 2015). Regarding this aspect, as shown by Kelty (2016), we oscillate between two horns: liberation and cooptation. From one side we consider it as being a solution to our most practical concerns and sometimes we envisage it as an ethical calling; from the other side it becomes a modality to collect money and data from us. Or it could be a regimental, controlling and frightening strategy designed to keep us in place. In the political sphere participation has been recently declined by the worldwide “populistic drift” as direct democracy, in a sort of contraposition with representative democracy, believed to be by the majority of people the only possibility in complex societies. Clearly, participation can express both the act to elect representatives by citizens as voters and the possibility to loosely express opinions in the public domains. The idea of “participatory democracy” was created in 1962 by Hayden (Bachrach & Botwinick, 1992) and during time the synthegm caused fears, such as that of excess participation (leading to the dictatorship of the majority, for example). Some authors highlighted the importance

of considering technology, infrastructures and material practice as being important parts of the political sphere, permitting a wider and coherent participation (Marres & Lezaun, 2011), that will enhance attendance. The idea that citizens could actively participate and produce knowledge for the governance permeates many political parties and followers. This also thanks to high tech industries, that invented various participatory designs usually opposed to the “top-down/hierarchical” managements (i.e.: agile development, open source, holocracy, participatory design – where power is removed from hierarchies and accurately redistributed, just to mention some of them). The sharing economy (i.e.: Uber, Airbnb™) added flavor to the idea, because two dreams were apparently ready to be satisfied: to participate in the economy and accurately redistribute labour, after having removed it from a management. Participation per se is optimal, even if it must be distinguished between voluntary and involuntary: being the latter cooptation, it is not valid. There are clearly problems even for the former form, as individuals can more or less consciously participate in goals and activities of others, but if some forms of control are adopted, the risk can be decreased.

### **Welcome to the “post” era.**

A neologism was recently created: “post truth” (Salmon, 2007), defined by the Oxford dictionary as being the 2016 international word of the year, whose definition could be “related to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief.” In Germany the Wiesbaden-based Society for the German choose the 2016 Teuton word of the year as being *postfaktisch* or post-factual. According to Cacciari (2017): “Since some decades, the impotence to define with its proper names the essence of the era in which we entered or better, we jumped in, is demurely masked by preceding a “post” to the old name, which maintains all its loved and familiar contents” (Cacciari, 2017:9). For the Author, the mother of all the odiern “posts” was post-modern, and the last lessical trick is post-truth. Ferraris (2012), caustically synthesized post-modernism in this way: the “idea according to which all reality – tables, mountains and diseases included – is socially built, thanks to the action of persuasion, that of media and the political and economic power” (Ferraris, 2012:93). Can all “posts” that surround us confront the challenges of the new Millennium? Cacciari affirms that post-truth is not able to re-form a symbolic order permitting to recreate a new order able to substitute the old, so our destiny is to remain in our Babel. The incessant flow of information, the illusion of communication, the outburst of emotions, the questioning of the basic values in a comparative-relativistic way could lead to catastrophic errors (may be we can call them post-errors?). Clearly, democracy is at risk when, for example, artifacted fake news are amplified in the Internet, influencing voters. This recently happened in politics, where the confluence of social networks with various populist movements, deprived of the traditional “checks and balances”, permitted the appearance of an information ad hoc, or in function of people’s opinions and prejudices. Populisms are on the rise everywhere. According to Mudde (2013) various as the ways to interpret the concept populism. It is a philosophy showing three main features: anti-establishment, authoritarianism, nativism. Usually the virtues of ordinary people are emphasized, in contraposition of the cynicism of authorities in general, such as the privileged rich, the banks, multinationals and big business in general, media, politicians and intellectuals. Populists divide the ordinary people (considered as being homogeneous and “good”) from the elites, that are indecent (Barr, 2009). If representative democracy favors institutional checks and balances, populists favor referenda, exit polls, plebiscites. Traditional versus progressive values are privileged: nationalisms, misogyny and sexism rapidly surge. Ingelhart & Norris (2016) call this “xenophobic authoritarianism”. All this clings with the article 19 of the Universal Declaration of Human Rights (1948), that recites: “Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and

regardless of frontiers”. This is exactly what happens today with the plethora of blogs, research engines, social networks, that now we can handle in the palm of our hand, thanks to the smartphones, the indispensable borderless Guardian angel of the daily life of billions of people. In this way, atemporal and ahierarchical Internet diffuses at the same time science and pseudo-science, hoax and urban legends, evidences and fake proofs, preposterous correlations and so on. The chaos is high and clearly, between culture and charlatanism the winner is the most represented on line. This unprecedented expansion of freedom, only apparently democratic, is somehow in contraposition with the traditional media, in which professionals are prepared to interview, report, testify in person an event, to study different problems and dossiers. The latter media are considered as being fundamental for democracy and, at the same time, sometimes accused of contiguity with the power, all the times that the news are distorted if not concealed. The new media, being open to everybody, dodges all political and economic influences and could create participation, but also deadly although plausible news. Sometimes they asseverate political debates based on opinions and not facts, affirmations instead of truths. The web is showing its dark side, according to Bavarez (2017). The cyber-crime turnover is estimated to be 450 billion dollars a year; cyber war was experimented towards Georgia, Estonia and Ukraine; the intensive use of social networks by populist movements is growing; the use of piracy to favor nominates has been ascertained. The cyber world, that theoretically should be neutral and self-regulating, in reality is Balkanizing itself, as the USA favour the GAFSA oligopoly (Google, Apple, Facebook and Amazon); Europe creates the 2016 Privacy Shield trying to protect citizens freedom; while China and Russia “democratures” want to control Internet. The Author invokes a world agency and global strategy to supervise the different aspects of the Internet, plus more investments for digital safety.

We are probably shifting from social democracy, that from the late '70 was the leading hegemony, to some forms of authoritarian populism that, in different ways can legitimize different standards in term of class and nation division, and enhance inequalities among different ethnic groups. It tries to maintain the presuppositions of gender division, induces subordinate groups to identify with “the greater good of the nation”. The leaders that, with different nuances, are defined as being populists, remind to the anthropologist – with the proper proportions and distances - an episode quoted by late Lévi-Strauss (1958), regarding a shaman, named Quesalid, who not only wrote an autobiography in the Kwakiutl language, but started his career to understand the tricks used by the shamans to cure diseases. He was in fact suspicious that shamanism was not true. In the cultures where shamans, sorcerers and magicians operate, they furnish answers that are inside the logic of the magical and mythical beliefs of the cultures in which they are inserted and work. Quesalid, when decided to become a shaman, started showing demeanours that were behaviors that occurred in consequence to a logical and unitarian pattern. Having perfectly understood the particular tricks used by his colleagues, he let himself be persuaded by people who gave him confidence. He became shaman because he recognized that the only force of a sorcerer is the faith that the group casts upon him. Mauss & Hubert (1902), explaining the magic behaviour, stated that it is the faith of a group that permits to his “arts” to be effective, as the group identifies itself with the shaman. Malinowski (1936), observing the devastating effects of a tropical typhoon in Melanesia, reported the case of a shaman, called the “magician of the wind” who, with particular songs, imposed the wind to calm, assuring the scared people that the village would not have suffered from the storm. All the people were reassured: when facing an emergency situation, the psychological disorder was substituted by a sense of trust. The magic, in this case, has the function to let a shaman to become a guide. Parallelism is evident in certain modern political leaders who are plenty skilled in exploiting fears and discomforts. They became politicians without a specific background, perhaps mindful of Ronald Reagan. These new “shamans” preach direct democracy and instead practice a precise theocracy: that of themselves. Malinowky was convinced that socially, the magic, giving the lead to a single man, sets out the organization at a time when organized and effective action is of paramount importance. De Martino (1948), on the basis of different ethnologic elements,

observed that primitive magic would start particular human energies, the possibility of a psychic action on reality. And in the transitional phase where emotions prevail, ratio can be easily substituted by the magic: instead of progressing, we are regressing.

### **The transition from body to mind: Can cognitive sciences help?**

When emotions prevail on the mere presentation of facts, sensations overwhelm reason and conceptions trump perceptions. Some anti-system political parties, when accused to disseminate fake news, overturn the accusations and denounce the mainstream media of spreading false news: The idea of *lügenpresse* (lying, mendacious, defamatory press, Köcher, 2016) is not a novelty! Famous is the case of Truthy, an academic research project started in 2010 aiming to analyze how information is spread on Twitter. It became a case study on how Internet can spread falsehood (<http://cnets.indiana.edu/blog/2014/08/27/the-truth-about-truthy/>). Clearly, reality is difficult to be understood and every piece of information should be analysed on the basis of the work done to be presented. Serra (2017) affirmed that an “infallible clue to measure quality is the tone. The shouted titles, the simpleton comments, the boyish invectives are exactly the contrary of the intellectual work, of which information is a very pop and very important branch” (page 26). The problem is that we are now consuming “augmented news” as we are completely get accustomed to augmented reality, with problems, as virtual self can affect reality self (Cuddy, 2015). This because augmentation can capture our attention and imagination, creating strong emotions, such as amazement. We need more and more sentimentality and sensationalism. Niola (2017:23) concludes: “It is happening what prefigured Theodor Adorno or, as Enlightenment reached its apogee, it is overturning itself in mythology”. Damasio, quoted by Salmon (2016:29) claimed that “today, with Internet, and cave TV, broadcasting information 24 hours on 24, you are immersed in a context in which you have no time to ponder”. Many students are investigating on the ‘new grammar’ created by these movements, to check whether it is a new reality or not. As Kelty (2016) claimed right from the title of the paper: the problems may be “to produce too much democracy in all the wrong places”. Some authors, like Weigend (2017) claims that privacy is dead. Thus we must control our online reputations (the book has been apparently written for middle/high class professionals: it is not able to explain how common people can protect themselves). Psychologists investigated the Baumeister et al’s assumption (2001) according to which “bad is stronger than good”, a pillar for those politicians who are very clever in highlighting defects, but are unable to propound optimal solutions. On the basis of different evidences, the above mentioned psychologists found that what belongs to bad, such as emotions, parents or feedback, affects us more intensely than good. Not only, but bad feelings and clichés not only form rapidly, but are more prone to fill them with the confirmation bias, the “mother of all cognitive biases” (it is the tendency to assign more value to what we think or believe and to discard what is against our beliefs). In practice, our basic tendency is to maintain the *status quo*, because in our evolutionary past the environment was dangerous, therefore we were very sensitive to dangers, risks and even presages: for our evolution risk-adversion was better than risk-taking (Pinker, 2015). Shermer (2016) suggests that loss aversion (a loss hurts more than a gain) and the endowment effect (we tend to value what we own more than that we do not) are reinforced by the status quo bias or “the tendency to opt for whatever it is we are accustomed to. For example, we tend to prefer existing personal, social, economic and political arrangements over proposed alternatives” (Shermer, 2016:71). Other cognitive biases will be probably at work, like pillars in a stilt house. Clearly the negativity bias, highlighted by Rozin & Royzman in 2001, plays an important role, as in many domains of life, we seem almost preternaturally pessimistic. Travis & Aronson (2007) created the metaphor “pyramid of choice” in which two individuals facing each other at the top of a pyramid will diverge and reach the basilar bottom opposite corners of the building on the basis of the positions to be defended. In fact, the authors report an incredible amount

of experiments showing how people adapts facts to preconceived beliefs, in order to dampen cognitive dissonance. We must be aware that everybody has her/his own vision of the world and a self-concept. Therefore we must consider also the backfire effect: corrections increase widespread misperceptions (Nyhan & Reifer, 2006), in order to safeguard the previous aspects. The question at this point is: what happens to a body living in the post-truth era? What will be the implications for bodies whose minds are shaped by sources of information chosen on the basis of people's own viewpoints and preconceptions and the fact that particular biases undermine evidence? Sometimes the information sources are completely false, and an artfully concocted information is spread, echoed in the Internet, apparently influencing the public opinion and the electorates, even in distant countries. When emotions and sensations take precedence over the fact, the reason is overpowered. Garton Ash (2016) called Google, Facebook and Twitter the "private superpowers", as their algorithms have an extraordinary power, being able to select the posts belonging to millions of persons everyday. Till now these superpowers preferred to pass themselves off as neutral (clearly they cannot become the first arbitrators of truth), but recently something is changing: thanks to the growing number of fact-checking foundations able to get people to be aware of the reality of facts, the blatant lies will have short legs. But there is still a long way to go for fakes control, as it will be quite difficult to eradicate or to root out: this is a preventive activity. While for those who are prone to gut reactions, it would be necessary to "eradicalize", a very difficult task, as our psychological structure evolved to favour the rule. In this case a cognitive process, highlighted by Kahneman *et al.* (Armstrong, 1984), is selected: the one that is less costly for us in terms of effort, as our mind is parsimonious. Kahneman's subsystems are type 1 and 2. The first is fast, intuitive, and mostly unconscious, useful for daily activities. This is the cognitive process that is usually chosen, because it is less fatiguing. The second is conscious, needs time, it is slow and less prone to cognitive biases. Clearly, when cognitive avarice marries with rule fostering, the search for the tedious truth is annoying. What is frightening and unexpected, is the fact that the newest generation, (the so called "millennials", or those born at the beginning of the millenium that are defined as being "digital natives" as they use the new technologies from an early age) are, according to the Stanford-based Graduate School of Education that quotes the results of a wide research, completely unprepared at all levels to collect information in a proper way from Internet. The research project started at the beginning of 2015 (Brooke, 2016), collecting data from 7800 junior high, high school and university students, having different socio-economic and cultural backgrounds. The Stanford project reports that the millennials are not prepared to reason on the information gathered in Internet, as they are not able to distinguish between advertisements and news, not to mention the identification of the sources. Even the schools do not help, as the materials they use on the reliability of Internet are outdated. So, apparently, what is happening recalls the times of the appearance of television, when an avalanche of information was downloaded to a mass of people sometimes illiterate. A *mirabile dictu* circulated: "It's true, as we saw it on tv".

### **Shifting ideas on the body**

We are perfectly aware that our ideas about the body changed during time and this changed the ways in which we treated, used, misused and abused our bodies and those of the other humans. Thus, it would be intriguing to understand how they are nowadays mutating. However, the way in which the body is interpreted and studied by modern science is always far from the lived experience, because of the difficulty to verify how the human bodies (those of a strongly social animal, prone to different cognitive biases and substantially conformist), are adapting to the societal changes in "real time". Some trends are clear. For example: "Thousands of individuals affected by common and rare conditions indicate that they do not wish to be referred to as patients. "Patient" describes a person sitting on the exam table in a flimsy johnnie—the epitome of information and power asymmetry.

This is not how the millions of people living with chronic or genetic diseases view themselves. We are also not subjects—that is, “a person or thing being studied.” Words matter, and using the word “participant” recognizes the actual engagement necessary to revolutionize clinical research and the resulting health interventions. Some investigators think that the term “participant” is a misnomer and should not be used. If that is so, and people with illnesses are not participants or partners in clinical research, then it is time to change that” (Terry, 2017:2). There is more, many scholars around the world are nowadays operating a critical examination on how the new digital devices are changing our ideas about the body (Lupton, 2016). The new digital devices and the widespread use of “apps” are generating an unprecedented amount of data on the localization, movements, behaviors, functions and even appearance of our bodies: we are going towards a “digitized embodiment”. There are emerging fields of study that can elucidate much better the issue, such as: digital sociology, digital ethnography, digital and social media studies, cyber cultural studies and others that are coming out into view. Then there is the political domain, whose study will occupy lot of researchers in the Trumpspheric and Putinspheric eras (characterized by heads of states who are the leading exponents of the so called “post-truths” or “post-factual politics”, a reliance on assertions that “feel true” but have no basis in facts. In their countries they rose an unempirical, fictional, *Realpolitik*). In reality the pressures on our bodies aren’t so strong as they were only a decade ago. Regarding this aspect it is possible to collect clues from different sides. In effect findings on the trends on Body Mass Index verified on millions of participants worldwide (NCD RisC, 2016), show that the obesity epidemics is going on. In fact, if nothing changes, it is supposed that by 2025, global obesity prevalence will reach 18% in men and surpass 21% in women; severe obesity will surpass 6% in men and 9% in women. A role in this worldwide epidemics - among other aspects - could be played by a new indifference towards the body. Nonetheless, underweight will remain prevalent in the poorest regions of the world. Another example: the interventions on genitalia due to cultural pressures. Among the Venda, a South African population, male circumcision is still practiced (considered as being essential for manhood), while expansive interventions in female genitalia such as labia minora elongation are ending, overwhelmed by economic and social change (Dionisio & Viviani, 2013a,b). As soon as social and economic changes occur in Africa, body image modifies itself (Viviani *et al.*, 2013). This means that even in unwealthy countries the control on the body is not so strict anymore. In more advanced environments some subcultures belonging to the youngest generations show a clear shift, for example the distance existing between the “old” yuppies and the modern hipsters. Roche (2009): “For the yuppies of American Psycho, one’s identity is not so much represented by one’s appearance as it is one’s appearance” (Roche, 2009:125). This image is completely different from that of an odiern hipsters, whose alternative culture emphasizes activities and clothing which better cater to their demographic characteristics. In fact or they are skinny or overweight, if not obese. For them, their outward aspect is not important so, with respect of the yuppies, their bodies are somehow neglected. This might be another clue. The behaviour of a genius like Steve Jobs could be that of a “superhipster”, probably affected by pervasive optimistic bias (Shermer, 2012), or the tendency shown by many entrepreneurs to be grossly overconfident and optimist about not only their success in businesses, but also towards their own body. He, in fact, according to biographer Isaacson (2011) refused surgery after a diagnosis of pancreatic cancer and tried different remedies found on the Internet, unfortunately unsuccessful. Wilful optimism trumped reality. Martinis (2016) analysing food habits and their relationships with the neoliberal economy, argues that the worries about food, found especially in Western countries, are a sort of “rite of passage” from a specific stage of development to a reconfiguration of the sexual and alimentary regimen, more “personalised”. They are, in fact, technologies of the self and the body, for this reason prone to changes. During the last century two main ideas regarding the body were at work (Grosz, 1995): in the first case the political effects of the social sphere were high. The body was an object produced. The second approach, due to phenomenology and psychoanalysis, is referred by Grosz as “lived body”. In it a strong dialectical relation between mind and body and social and

psyche is at work. A phantasmatic idea of self, arising not only from the body itself, with its sensations and experiences, but also from the external world and the social significance ascribed to what was embodied, permitted self-knowledge. This is not anymore a mere product of the mind, as wanted the European rationalism, but is a product of our experience of bodies, filled with social and cultural meanings. But, what is today the correct magnitude of the shift?

### **Can the body “in motion” elucidate?**

Probably a solution to clarify some aspects of the supposed effects, is to check the relationships existing between a body and the *primo movens* of our experience in the world: movement, precisely. In this sphere, sport is perhaps the human behavior that could permit to better understand how our conceptions on the body are changing, as it includes not only the single performer, but also the general public. And both are prone to accept alterity, especially if passed off as technological advancement. Sport is a structured, centuries-old activity (Huizinga 1950), whose core is a form of negotiated competition that is growing of importance especially in the so called Bioecological System Theory (Bronfenbrenner, 2005; Culpepper & Killion, 2016). There is another reason. Recently, the controversial idea that our body can be directing our mind as much as our mind directs our body took place, even if with serious criticism by authors who were unable to replicate findings (Lobel, 2014). Studies on embodied cognition are important to understand how our physical sensations sway, at unconscious level, our thoughts and our emotions, how our movements can be refined, and how they could influence our behavior. Last by not least they can provide advice useful to enhance performance (Afrechow, 2014), if the complexities of the debate nature vs. nurture are considered (Epstein, 2013). It is perhaps the case, before entering into an examination of sports in general, to sketch some of the main characteristics of it, that is a product of modern age. It was born, in fact, in the industrial and Calvinistic England, and it reflects the changes of the values and concepts of the bourgeoisie that reached the power (Tanga & Gori, 2005). The integration and the control of the urbanized masses that migrated in the industrialized towns created the parceling of labor under the taylorist model, which also permeated leisure time, that became a performing activity, and not only a mere animation for its own sake. Sport became a form of social control, with hierarchies in performance and therefore on the bodies. Little by little the different sporting activities not only demarcated the social classes (the wealthy people that had time to train and perform versus those who became amateurs or mere spectators), but were enriched with symbolic meanings whose main aim was to exacerbate the performance. We must bear in mind, in fact, that every sporting activity, even performed by a solitary athlete like hammer throw, implies a struggle against somebody. Every sporting activity needs an enemy, as each of them require that you are victorious over other groups. At symbolic level what is conveyed is the struggle against a foe, that is the gist of competition: maintaining high the competitive potential, every sporting activity keeps high the struggle spirit. In fact, the “function of symbol is not to tone down actions but to nurture them” (Viviani, 2016:19). And the power of a symbol is extremely high, as, in short, it hides showing and exhibits concealing (Chevalier & Gheerbrant, 1969). According to Morris (1981; 1994a; 1994b) a symbolic transference occurred between the human predator and the animal prey, as in the majority of the sporting activities there is a target to be hit, to be chased or defeated. In other cases, in which the aesthetic aspects prevail, such as in gymnastics, what is exhibited is the animal that wants to triumph over the herd. All animals show ritualized behaviors towards the conspecific peers, whose aim is to dampen intra-species aggression. In man this does not usually happen: it become evident in team competitions and in sporting contexts in general, where what is conveyed is not only a product of symbolic mediation, but also rules and norms that mimic part of the wide range of possibilities offered by different motor activities. At its beginning, the competition factor was the main sport value, expression of the forms and contents of the bourgeoisie. Little by little, as shown by Stone (1970) all the modern sporting activities were influenced

by the double dynamics of play and exhibition, play and display. With benefits for both the players and the spectators. But the characteristics associated to play could become dis-play as soon as the number of spectators grows, as everything is transformed in spectacle, where the interests of the audience are preeminent with respect to that of the players. Sport could become a ritual, as the players can lose spontaneity, unpredictability due to capriciousness, and playing innovation. In addition, at the highest level of performance, in fact, it is impossible to distinguish between work and sport. During time, sport became more and more important, for different reasons, ranging from the fact that for many people it is a source of existential meaning, for others a source of *raison d'être* and, at collective level, one of the main sources of excitement and collective identification, able to de-routinize and compensate the irrelevance of the customary life. During time many authors criticized the validity or some requirements of sport (among the most famous: Dewey, 1899; Veblen, 1899, Gehlen, 1965; Fromm, 1976), with assumptions ranging from “narcissistic sublimation” (Volpicelli, 1960), to “a power tool leading up to childish attitudes” (De Greef, 1947). Interesting was the work of Elias & Dunning (2008), sociologists with a philosophical vocation, that were observing sport as a dynamic configurator of social relationships. However, sport is also expanding because:

*a) It is in seeking approval from public opinion, assigning to itself ethical justifications that often disguise dull ideologies invoking assumptions uploaded by demagoguery, that unfortunately we usually take for granted. b) It is looking for a greater adhesion and basis of participation, to guarantee bigger catchment areas to draw from in the selective processes, whose aim is to trace and collect champions.* (Tanga & Gori, 2005:389).

Krouwel et al. (2006) showed in an interethnic study valid for multi-racial Holland that from one side physical training may have positive effects, but has difficulties in integrating new groups and dissolve inter-ethnic tensions in different social domains: “Sport can recondition individual persons, but perhaps not society as a whole” (Krouwel et al., 2006:177). Despite its bivalence or the gap existing between what various sports typically propagate (a model of behavior versus a model of being), the body, that is the direct protagonist of a sporting performance, is often denied, if we consider the mass of supporters or fans who simply sit and admire the athletes. They are probably using the mirror neurons only. But also the athletes’ bodies are exploited: their bodies are sometimes mere tools.

## **Modern trends in sport**

Recent studies on how motor skills take place showed that they are indicative of learning in general (Chase & Schwartz, 2011), therefore focalize the attention to sports in general appears to be a good perspective. New social media and digital media technologies, for example, are more and more important for the improvement of skills among action sport participants, and are creating a new sense of community (Gilcrist & Wheaton, 2013), thanks also to social media platforms (among them Facebook, Twitter, Instagram and Snapchat - Hutchins, 2011). In recent year new technologies permitted the spread of social media, not only athletes can now use these media to promote their personal brand, but also to earn money from both point of sale and ad revenue. The same is going on with websites permitting to teams and coaches to capitalize from websites. Keepers of blogs, the users of Internet journals, developed sports blogspeak or languages developed for and used in blogs. An incredible number of the so called sports memes, or blogspeak for an idea that is spread from blog to blog, are at present available on line. This means that general public can also become more and more involved with the preferred team. New relationships between corporations, sport bodies and communities are therefore created, as suggested by the ethnographic research work carried out by Thorpe in a decade (2014, 2016). The effects will be important for sport athletes, recreational participants and audience in general, as suggested by sport and

new media studies (Hutchins & Rowe, 2012; Lupton, 2016). In the sport domains different technologies have quickly evolved, thanks to miniaturization and the improvement of wireless devices. The use of GPS, gyroscopes, accelerometers can now be lodged in athletes' jerseys or even in their cleats. This is particularly evident in contact sports: athletes, coaches, trainers and scientists are widely using them. The so called wearables permit the measure of our physiology in real time 24 hours on 24. They can be personalised, avoiding comparisons with the average population. Given the high differences existing between subjects, average values do not permit to collect important diagnostic clues. Wearables are able to capture in real time variations in relation to the normal values of the single individual under control, furnishing a greater accuracy. The examples are many: tracking systems that can not only monitor athletes' health in real time, others to assist fatigue and more recently, system to detect head impacts to prevent concussion. High definition cameras are permitting to check the athletes' movements; geo-analytics permits to understand team's geographical positions. In a close future multiple devices are expected, for example systems capable to monitor the perspiration rate, with others used to improve performance, checking for example athletes' activity and sleeping patterns, with the aim to assure a better personalized guidance. Not only, now European rugby teams are experiencing a micro location technology that, 2000 times per second, can transmit the exact coordinates of the ball and the players (Radio Frequency Identification Technology: <<http://www.technovelgy.com/ct/technology-article.asp>>). But this astounding device can be used to calculate speed, accuracy and, eventually, force of impact. In Holland, researchers of the Netherlands Organization for Applied Scientific Research, developed a clothing line called Haptic Sports Garment, a prototype that will permit the athletes (mostly soccer players, rowers and skaters) to coach themselves with an apparel line that can sense every move of the individual and permits the subject to know which body areas need to be improved (Glaskin, 2005). All these improvements are changing in the United States the status of new sporting activities, that will be considered a championship sport if 40 or more institutions sponsor each of them as a varsity intercollegiate sport, intend to participate in post-season competition, and will compete in a minimum of two National Invitational Events. In the next future, for example, activities such as competitive cheer & dance, men's and women's bowling and lacrosse, plus men's volleyball, can aspire for consideration if all the legislative requirements will be followed by the practitioners. Incredibly various and somehow disturbing is the scenario opened by genetic research. This will be enhanced not only by the increasingly cheap and powerful DNA sequencing methodologies, but probably by the accurate measurements of new devices able to monitor personal characteristics. They will be also capable to include environment exposures (Berg, 2016). Different kind of technologies can be applied in a various and incredibly high ways (McGhie & Ettema, 2013; Tetsuya *et al.*, 2015). The majority of the American universities not only emphasize high quality teaching and research, but they must show to be competitive in intercollegiate athletics, because they need external support especially from state lawmakers. Sports became a way to connect the Ivory Tower to the common people that, as tax payers, would not like to give funds to institutions whose benefits will be enjoyed by other states or countries. Sports create spillovers permitting universities to be state supported if not financed. At this point, it is clear that sport, that in the past was physical exercise practiced by small minorities or during festivals, became the real sport of today. Sure, it is able to satisfy the basic motivations of the human that, according to Bouet, quoted by Tanga & Gori (2005) are: the need for movement, self-affirmation, compensation, aggressivity, social affiliation. However, these motivations are also those of the game, that differs from sport mostly because it permits to create interactive contexts imagined by the same protagonists on the basis of their real needs and aspirations. But modern sport is less and less game...

### **From Biopolitics to Psychopolitics?**

Biopolitics, as it has been theorized by Foucault (1997), was a product of the analogic and televised world. According to the French philosopher, in the most industrialized parts of the world the body

was one of the tools of the industrial production and therefore under political surveillance, constantly monitored in all the somatic, biological, and bodily aspects. Late Bauman (2011) affirmed:

*The new primacy of the body is reflected in the tendency to shape the image of the community (the community of dreams made of certainty-cum-security, the community as greenhouse of safety) based on a model of the body protected in an ideal way... ..the body and the community are the last defensive outposts in the increasingly deserted battlefield on which is raging relentlessly the war for certainty, the security and safety.* (Bauman, 2011:215).

The authors talked about the “liquid” modernity, that arose from the inability of the State to dispense certainty and security. Nowadays, in a digital and reticular world, with the creation of boundless social networks (that, as already said, could rise a participative culture but also favor mass manipulation), a new paradigm is arising: what is going to be controlled is not the body, but the mind through our emotions. The more correct term, today, appears to be psychopolitics (Stiegler *et al.*, 2006; Han, 2014). And this not only because Google, for example, exploiting with its pageranking billions of individual cognitive researches every moment, creates the so called shared knowledge, but also because the information technology is shifting towards the communication technology (just to make a pertinent example: 60% of the visits to the newspaper USA Today are on its sports pages and many are shared). But because, as shown by “networked politics” or “networked social movements”, that online technologies can coordinate large number of people, even in absence of central organizations (González-Bailón & Wang, 2016). Assuming that in our future our emotions will be “controlled” thanks to our “willy nilly” adhesion, as stated by Han (2014), whose work, in the final part of his book, is really frightening. This because, according to the philosopher, after biopolitics we will face digital psychopolitics, based on the power of the digital media to make predictions on the likely behavior of people, that could, in a close future, manage behavioural trends on a global scale. Unfortunately, in the final and concise part of the book, the author’s apocalyptic vision takes a prophetic tone, rather than philosophical or scientific. Solutions are not offered. Clearly it will be difficult to propose utopies like to introduce in schools courses on emotions in order to make schoolchildren aware of their own feelings and desires, or the the riformulation of televised, digital and media formats, but other already available solutions could be devised. For example to expand the Digital Literacy Informed Citizenship. The already mentioned Graduate School of Education based in Stanford (Brooke, 2016) not only monitors the digital natives’ naïveté, but sends teachers in schools and universities to show how to teach digital literacy (Weber, 2017). A first version of their kit has been downloaded millions of times, although this is a drop in the bucket. Connected to this there is another effort to be followed and expanded: To let people become aware of their biases. For example expanding Project Implicit (<https://implicit.harvard.edu/implicit/>), that is a no-profit organization whose mission is to help people to cope with cognitive biases, as they happen outside awareness and control. Its files could be translated and exported in other countries. It will be also necessary to create and support the fact checking foundations, whose number is no high outside the USA. They are for sure small efforts in times where cosmopolitan liberalism (promoting a pluralistic democracy, tolerance with different cultures, multilateralism and progressive values), is at the mercy of a worldwide petty bourgeoisie that is retreating on traditional values, favours populisms, with its anti-establishment claims, chases the need of a strong leader supposedly attuned with the popular will, that is fattening nationalisms. In the foolish idea to be “mobilized”, thanks to the social media, that permits to talk to the mutes, the dumbs, in the illusion to make a revolution, that anyway exclude emancipation. Emancipation is not be at disposition of all the “mandamus” appearing 24 hours on 24 in our electronic devices, emancipation means to have the possibility to change the cultural values. In any case, the future of a mankind whose emotions will be preeminent over rationality (as if the latter wasn’t wide open on the previous), the Deneault’s profecy (2015) will be fulfilled: Mediocrity has

seized power. Welcome to Mediocracy. For the Canadian philosopher governance (the wealth of the economic and financial sector) is the theory, while mediocracy is the practice. Mediocre individuals dominate the scene, not only in politics. This implies that the political differences existing between right and left are cancelled, and the funds allocated for the multinationals and tax havens outweigh those devoted to social services: there is no alternative. The experts dominate, while the intellectuals are put on the corner as mentioned by Saïd (2003). The expert is usually working on the consolidation of academic and cultural powers, while the intellectual pursues broader horizons. In the new age mediocre characters will take, little by little, the power. According to Deneault, there is also the possibility of the alliance between the critics of mediocrity with the all those that are mediocre on the sideline or because of the need. This will permit the creation of “movements”, such as Occupy or the now-defunct Arab Spring, that somehow, attempt to undermine the foundations of mediocrity. But, as the mother of conformists is always pregnant, other mediocre individuals, sniffing the air, will adhere, as it happened half a century ago, when a lot of persons became left-wing supporters. Projects like the Oxford-based Seshat (a global history databank, whose name belongs to the Ancient Egyptian goddess of writing and wisdom - <http://seshatdatabank.info/>) could be helpful. The databank's aim is to find patterns and analogies in societies also very distant in time and space. Their comparisons will permit to understand what is the weight of different factors in the destiny of those societies. As already mentioned, creating, supporting and financing checking foundations able to unmask the fake news could be helpful, and their number should grow worldwide. In hard times, the only possibility is to resist. A quite difficult task, even for scientists who, not only faced for long time institutional pressures to freely speaking directly to the general public (Martinez-Conde et al, 2016), but because “by using close-hold embargoes and other methods, the FDA and other institutions gain control of journalists who are supposed to keep an eye on them” (Seife, 2016:47). If this is the state of the art...

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