Transducing Bodies, Translating Health

Intercultural e-Health and Legal Chorology

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Abstract: The essay examines the anthropological, legal, and semiotic implications of a new method for healthcare, precisely, "e-Health". In many respects, telemedicine constitutes an extraordinary improvement that could solve many of the problems resulting from geographical distance between patients and doctors. Despite the benefits of providing medical assistance through an intensive use of e-Health, however, there are potentially serious pitfalls. These primarily stem from the apparent immediacy of the images transmitted and displayed by IT devices. Seeing the body of the *remote* patient synchronically represented on the desktop conveys the idea of an actual proximity. In other words, the visual representation could be (mis)taken for a real presence, as if the patient were 'here and now' before the doctor's eyes. However, geographical distance often includes a cultural remoteness between the two sides of the medical relationship. The patient's body and its disease are not mere empirical data, but rather epitomes of a web of experiences; they are constituted by a multifaceted relationship with life environments. These relations move through experiential landscapes, projected across space and time, and are semiotically summarized and translated in the phenomenon of "disease", the object of healthcare. Gaining knowledge of the "semiotic clouds" underlying the patient's bodily conditions is a very difficult task which doctors usually accomplish through their cultural *continuity* with the universe of sense and experience lived by the people asking for their assistance. While telemedicine can annihilate physical distances through the immediacy of its remote images, unfortunately it is not equally efficacious in bridging cultural distances. On the contrary, its immediacy could lead to a false conviction that what the doctors see on the desktop is all that they need to understand about the patient's conditions. This assumption could, however, lead to dangerous diagnostic mistakes due to the doctor's belief that his environmental and cultural imagery is the same as that of the patient.

The idea that images, taken in their iconic appearance, can convey a whole empirical reality is to be radically confuted, precisely to enable a positive exploitation of all the possibilities potentially offered by telemedicine. To illustrate the pitfalls encapsulated in the presupposition that seeing is synonymous to understanding, the author traces a sort of brief history of the *iconization* of concepts. The cognitive journey begins with prehistorical cave paintings and unfolds to include contemporary comics. The path of the representative function through the ages demonstrates the relationship between the textual and figurative elements of communication, and at the same time, the human tendency (gradually increasing) to transform the semiotic/graphemic representational sequences into symbolic/conceptual synthetic images. This process accompanied the creation of bounded cultural circuits of communication by Neolithic man, which corresponded to settled agricultural civilization, and the social transmission of implicit semantic basins that people held and used to understand each other.

If e-Health is to achieve its goals, an awareness of the landscapes of semantic implicitness that each cultural and spatial circuit of experience provides must be cultivated. Doctors and patients involved in the telemedical relationship will have to consider the body as a sort of *border* between geo-cultural spaces, to avoid the massive dangers hidden in the overlooking as well as the misinterpreting such implicit landscapes. This means that the empirical visibility of the body should be reinterpreted as an *interface of translation* between the different spaces of experience and signification which telemedicine puts in proximity, despite their geo-cultural distance. Within this new semiotic and experiential inter-space drawn by the sextant of the human body, different anthropological and legal considerations are to be trans-duced so as to coherently and pragmatically support the representational synchrony supplied by IT devices. Linguistic, experiential, and legal discrepancies could break that

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apparent conceptual unity of image, and make semantically asynchronous what only appears to be empirically represented in its whole immediacy. The risk is that this asynchronism could fuel deep cognitive biases stemming from the superimposition of the doctor's implicit knowledge and spatio-temporal framework over the patient's imaginative and experiential semiotic landscape. Should this occur, an anthropological ignorance of close-and-remote otherness could induce the ultimate danger: diagnostic errors that poison the waters for Telemedicine.

Keywords: E-Health, Medical anthropology, Legal geography, Intercultural translation, IT communication.

Summary: 1. Prologue; 2. In what ways and under what conditions are doctors allowed to intervene on (only) tele-displayed bodies? 3. The body as a thing vs. the body as a relational process; 4. Prehistoric art, comics and cognitive psychology: the chorological implications of e-Health; 5. E-Health and the Earth as a legal inter-space.

1. Prologue

E-Health, otherwise known as telemedicine, marks the entry of state-of-the-art information technology into healthcare practice. In layman's terms, it could also be labelled "distance care".[2] Personally, I like this last definition for two distinct reasons. First, it is more general and less idiomatic; second, it immediately focuses on the feature of e-Health that most concerns me: precisely, distance.

E-Health, in all its various implementations, is characterized by one essential feature: through technology, it annihilates distance, making it vanish. The body of the ill person and the scrutiny of the doctor—but not only that, as I will show below—create new ways to experience and make use of proximity, in spite of geographical remoteness. Using an icastic phraseology, it could be said that the "pathological elsewhere" and the "therapeutic elsewhere" become close, transmuting the communicative ubiquity assured by information processing into mutual *presentiality* and *topicality*.[3]

Telemedicine is proving to be extremely efficacious in the monitoring and caring for patients suffering from diseases, providing assistance with home care in the case of chronic diseases, promoting exchanges of information among healthcare professionals located in different parts of the globe, allowing for therapeutic collaboration so that the best medical/scientific care currently developed on Earth can be supplied at a local level, implementing so-called "telesurgery", capable of assuring a sort of planetary ubiquity of the best experts in different fields of surgical assistance, providing emergency medical interventions and timely assistance that were previously inconceivable in cases of natural disaster, disseminating critical disease prevention information necessary for health

[2] J. POLS, *Care at a Distance: On the Closeness of Technology*, Amsterdam, 2012. For an overview on telemedicine, outlined also from a comparativist perspective, see the text edited by Fondazione ISTUD: *Telemedicina e "Doctor Web": l'eHealth che Rinnova la Sanità*, www.istud.it/up_media/pw_scienziati/telemedicina.pdf. A survey on e-Health in the USA can be found in. M. MOHEN, P. WHITTEN, A. ALLEN, *E-Health, Telehealth and Telemedicine: a Guide to Start-up and Success*, New York, 2001, which, although not very recent, has the advantage of putting into sequence the key clinical and legal aspects (especially, p. 87 ff.) of telemedical practice in the USA.

[3] V. DUCLOS, *Bandwidth for Life: Global Health, or the Expected Space of a Common Humanity*, IFIP Working Group 9.4., 12th International Conference on the Social Implications of Computers in Developing Countries, Ocho Rios, Jamaica, 2013, pp. 889–902, http://www.ifipwg94.org/ifip-conference-2013.

education, and so on. The EU—it must be said—has been particularly engaged and far-sighted in this area of healthcare. Nearly two decades ago, European institutions responded to the challenges originally launched by the US, where telemedicine has been an area of investment for even longer. Among the most recent and relevant measures at the European Community level, Directive 24/2011on the application of patients' rights in cross-border healthcare[4] deserves particular attention, especially with regard to Art. 14 and a number of indications contained in the *Considerata*; also important is the Communication of the European Commission concerning eHealth Action Plan 2012-2020—Innovative healthcare for the 21st Century.[5]

So far, so good. E-Health really seems to be one of the fields where technological innovation can bring unquestionable benefits. Defeating "space" and the limitations it causes to the dissemination of knowledge and the development of human life is undoubtedly a target on which we can all agree, perhaps even a source of excitement. But the issue underlying this amazing enterprise is that space is not only physical and geographical; what's more, limitations deriving from distances should be measured using more than just kilometric calculations. This is because the space filled with and by human experience is not a void, indifferent to and independent from the activities carried out within it. Quite the opposite, this space is full, "articulated" by cultural practices, bent by their connotations and semantic relations. Shrinking physical and geographical space, to the point of annihilating it, engenders new communicative and existential proximities. The relativization or nullification of physical distance, however, impinges on only a portion of the lived space, the same space that hosts experience and is conceptualized through it. Conversely, it is precisely the evaporation of physical distances, their narrowing, that ends up emphasizing the semantic and cultural features of spatiality and its experience, dissociating them from those which are strictly geographical.

More generally, our perception of physical space is associated with certain modalities for putting our pragmatic know-how to use, based on ends and values forged by culture. The two aspects, physical/topographic and cultural, have been cemented to each other by history, traditions, and uses. Each of them camouflages and conflates into the other. It would a mistake, however, to think that representations of space are the mirror of an empirical reality placed *over there* and grasped regardless of subjective variables, of human ends and cognitive patterns, that are, of course, influenced by culture. The epiphany of space and its mapping are outcomes of experience and the "work" done by cultural determinants. If space is given to us as an almost de-subjectivized *thing*, it is only because our cultural habits work as a mental lens, and in this role they operate tacitly. They are so deeply integral to our view of the world that we do not perceive them at work. They seem to give us a vision of things "as they are"[6], making it impossible for us to have an immediate and irreflexive perception of their composite, dynamical features, derived from the interplay between organism and environment, in turn mediated by mental and symbolic activities.

When experience and its "usual ways", namely its habits, are hit by something new, an unforeseen event, that is the moment when we are compelled to once again bring the machine of reflection to life. In those predicaments, we imagine how things could be different than "they are", and their "being" is only "the end of a path, the outcome of a process of adaptation that has already been 'solidified' in concepts and their corresponding behavioral habits". The impact of IT tools on the possibilities to use and experience physical space is one of these subverting events. Telemedicine is capable of neutralizing geographical distance, making close and contiguous—with respect to our perceptive, communicative and cognitive capacities—that which before was destined to remain faraway or even remote. Thus, it can happen that the stuff of things and the bodies of persons placed in other latitudes are pulled into the range of our senses, cognitive faculties and, therefore, experience. Their empirical

[4] Directive 2011/24/EC of the European Parliament and of the Council on the application of patients' rights in cross-border healthcare, OJ L88 of 04.04.2011.

[5] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, eHealth Action Plan 2012 2020 - Innovative healthcare for the 21stcentury, COM/2012/0736 final of 06.12.2012.

[6] M. JACKSON, *Introduction: Phenomenology, Radical Empiricism, and Anthropological Critique*, in id. (ed.), *Things as They Are: New Directions in Phenomenological Anthropology*, Bloomington-Indianapolis, 1996, p. 1 ff.

dimension, or "thinghood/cosality", becomes perceivable by all, at least as a "virtual presence", and this can lull us into believing that seeing and hearing them in "real-time" produces an *immediacy* fully equivalent to that performed by bodies ordinarily placed within our spatial-existential horizon. From this perspective, telemedicine is a perfect example. Through an online transmission, a doctor can examine patients remotely and, given certain conditions[7], can also perform tele-surgery on demand.

In the field and through the conceptual spectrum of biomedicine, or reductionist medicine, by means of IT tools, the patient's body is made subject only to a virtual zooming in. Thanks to IT, its "being faraway", turns into a "being topical", being close, here and now. At a *closer* look, things appear, however, very different. The empirical dimension of the body—that is, what it retains after a subtraction of the cultural aspects involved in the bodily experience—lugs a series of relational, contextual and environmental connotations. These, in turn, can impinge upon the conceptualization of corporeality and the ways we conceive of the living body, the management of disease, the qualification and the legitimacy of care. The "video-represented body", in a sense almost teleported, can appear to be close and, at the same time, still distant. The analogy/equivalence between the IT displayed body and the material one, precisely produced through technology, may be incomplete or, at least, limited to its biological-quantitative[8] aspects.

The qualitative features of the body and its dimensions of sense ingrained in a whole background of experience and ends could instead remain distant and invisible, if not even more remote, substantially overshadowed by the IT-processed proximity of empirical-quantitative data.

What has just been observed could perhaps seem counter-intuitive. But this is due to the common habit of thinking of space and meaning as two distinct and unrelated domains. One is placed *over there*, and is thereby objective; the other pertains to what is inside, *here in the mind*, consequently intended as a realm of subjective projections. Even yet, to open up our thinking here, it would suffice to consider—as common language does—that these two domains, space and meaning, intersect and intertwine through widespread metaphorical expressions. The lack of proximity or co-exestensiveness of sense with respect to ideas as well as physical-geographical situations, can be signified by a single adjective, that can be phraseologically declined. Think of the expressions: "I want to keep him at a distance", and, "I distance myself from your position". Both could be ambiguous if they are not immediately contextualized. In fact, either could signify both physical and/or ideal distance. This semantic contiguity and the interrelatedness may be synthetically defined—by drawing upon a suggestion traceable to Plato's *Timaeus*, but also in the pre-modern tradition of geographical studies—as "chôra". The method for their analysis can be assumed, in turn, as "chorology". These two word-concepts mean the physical-categorical *continuum* that permeates the experience of space and, simultaneously, the appearing of space within and *before* the conscience. These words point out that space is, at the same time, both a premise and an outcome of the activity of categorization.[9]

That being said, we can now overlap the linguistic case just proposed with the specific situations generated by the "tele-medical gaze" on disease and patients treated remotely. In this regard, we could say—readapting the suggestion arising from the ambiguous nature of distance—that the doctor might face a chorological fracture. This means, more explicitly, that the empirical-perceptive distance of the patient's body could be considered as nullified, but meanwhile the ideal distance could simultaneously increase or, however, acquire increased emphasis. As will be shown below, studies on telemedicine

[7] As regards the problems related to telemedicine, and especially concerning the time required for the efficient management of remote tele-robots, see below.

[8] As for the transformative effects resulting from the involvement of the body in communicative and pragmatic processes implemented through IT tools, see M. MORT, T. FINCH, C. MAY, *Making and Unmaking Telepatients: Identity and Governance in New Health Technologies*, in *Science, Technology, and Human Values*, 4, 2008, pp. 9–33. J. G. ANDERSON, M. R. RAINEY, G. EYSENBACH, *The Impact of Cyber Healthcare on Physician-patient Relations*, *in Journal of Medical Systems*, 7(1), 2003, pp. 67–84.

[9] J. SALLIS, *Chorology: On Beginning in Plato's* Timaeus, Bloomington-Indianapolis, 1999. On legal chorology, see M. RICCA, *Sussidiarietà Orizzontale e Dinamica degli Spazi Sociali. Ipotesi per una Corologia Giuridica*, in *Scienza e Pace*, 2014, pp. 1–68, www.scienzaepace.it; id., *Uso interculturale dei diritti umani e corologia giuridica*, in *Humanitas*, 69 (4-5), 2014, pp. 734–750.

from their inception have affronted this possible discrepancy and identified its potential to create significant problems, so much so that discussion of this topic has been included in almost all of the texts on e-Health.

The problem of legal distance is the first among those which come into play and interfere with the abstract potentialities and the concrete chances for further developing telemedicine. This is not surprising. The body is a sort of pivoting icon of cultural experience and its ways of symbolic expression. If we consider that law gathers in and formalizes the axiological-cultural architraves of social life, it is nearly inevitable that the body is among the most relevant targets of legal projections and regulations. Human action is conveyed by the body's use, and law is precisely ordered to rule upon the outward expression of its subjective action plan. Moving bodies, although only virtually, also imply a joint transplant of their contextual relationships drawn by legal agencies. The technological displacement of sick bodies also requires and involves a transplant of their legal connotations, thereby a linguistic-political translation/transduction of them. But, as I shall show below, the symbolic-normative dimension is not the only bridge between the transportation of bodies and their translation. The "material" body is also an outcome of categorization processes, namely a semantic entity. Even it, thus, is to be translated as well as transported. In the same way, it is a part of the ecological space of lived experience and does not escape from the chorological *continuum*. And it is precisely to this point that I now turn.

To begin with, I should like to consider problems and constraints burdening telemedicine and driven by law, particularly, the diversity of legal systems.

2. In what ways and under what conditions are doctors allowed to intervene on (only) tele-displayed bodies?

The first problem telemedicine has to face relates to information. Let us take the body image of a geographically distant patient. Its real time transmission is only one of, even if the most intense, eHealth's possible components. This image is information in itself, but also the result of an activity of information's telematics management.[10] Even its *presentiality*—the dynamic image of the patient's body—provides incomplete information. The doctor must not only "see" but also "know". In order to accomplish therapeutic and diagnostic tasks, the tele-doctor also needs information about the "surrounding circumstances" of the patient and his body. Telemedical intervention could even be performed, at least in some cases, without "vision". A significant portion of e-Health concerns information sharing between doctors located in reciprocally distant places, such as the transmission of medical records, the development of databases, or the transfer of educational/training information focusing on the prevention and care of pathologies.

The body already shows itself to be something beyond its mere "cosality" even within the management of information. This is because it works as a crossroads where different rules on privacy and processing of sensitive data provided by different countries overlap and demonstrate, in many cases, their reciprocal incompatibility.[11] I propose some questions to better illustrate the point. What kind of data can be transmitted to the remote-doctor? Which legal parameters will be taken into account in facing and assessing this issue? Is said data to be governed by the source legal system or by the target one? And, in the case of differences between the respective state regulations, which behavioural patterns will the doctor and the institutions of the country where the patient is located follow? Furthermore, once the discrepancy between the legal systems involved within the telemedical therapeutic relationships is clear, what will be the concrete possibilities and methods of coordination

[10] I. MOSER, *Information and Its Uses in Medical Practice: A Critical Interrogation in IT Plans and Visions in Healthcare*, in *International Journal of Action Research*, 1(3), 2005, pp. 339–372.

[11] In this regard, in an already vast literature, see B. A. STANBERRY, *Legal and Ethical Aspects of Telemedicine*, in *Journal of Telemedicine and Telecare*, 12(4), 2006, pp. 166–175. A. L. TARASCO, *La Telemedicina per lo Sviluppo della Sanità nel Mezzogiorno: una Introduzione Giuridica*, in *Rivista Giuridica del Mezzogiorno*, 4, 2010, pp. 1387–1426.

between state laws with regard to respecting rules on privacy, on one hand, and the fundamental right to health care, on the other hand?

In answering the above questions, we could confine our gaze—at least, for now—to the European Union. Within these geo-normative borders, the right to appropriate medical care, supplied according to state-of-the-art technological-scientific competences, constitutes one of the teleological axes that ensure the promotion of telemedicine.[12] As regards the right to health, telemedicine looks undoubtedly like an instrument capable of assuring a *surplus* of implementation, and thereby a higher level of effectiveness. That the right to privacy and provisions for its protection at a national level may be waived as necessary to assure subjects their right to health care appears entirely plausible. This conclusion, however, should not be reached too hastily, as if it were an almost obvious outcome. Public and private duties to respect the right to bodily health must not forget or belittle the fact that the body is itself an object of representation and conceptualization. What it is, does not lie separate from the whole web of sense within which the schemes for its categorizations are forged. The importance granted to the human body depends on the value of the human being in all of her/his connotations. Among her/his features there are characteristics that do not strictly pertain to physicality. Nonetheless they beat time-life and punctuate the biography of the body intended as a living, dynamic, and social entity. Hence, it could occur that an uncontrolled use of a patient's clinical data through the transmission of information along the digital routes of telemedicine could cause severe detriments to his future life, social positioning, chances of getting a job, insurance coverage, and so on. Although through a roundabout path along time and space, all this could likely be felt by the *material* body of the patient as the intersections of life relationships enjoyed or suffered by his person. To engage with the possibilities and problems related to the management of information in telemedicine means, essentially, making a serious commitment to symbolically integrate prognoses with an understanding of all the possible the implications of healthcare. However, prognostic efforts should be carried out by taking into account not only the different legal regulations but also the various socio-cultural contexts, where the tele-patient could come to spend her/his future life.

Institutional and academic approaches typically address such issues by availing themselves of a specific conceptual tool, namely regulatory alignment among legal systems. The European Union provides an emblematic example in geo-cultural terms. The ongoing homologation among European legislations even constitutes the main target of many institutional agencies set up *ad hoc* (see above). Nonetheless, the creation of an inter-legal network is not able to face all the issues currently being raised (as well as those which could be raised) by an effective and widespread dissemination of telemedicine. The concrete applicability of legal rules has to rely upon backgrounds of axiological and deontic effectiveness of a "cultural nature". If placed at work in different contexts, even identical rules or statements will produce different results, results which are, above all, neither aligned nor equivalent from an axiological point of view.[13] No matter how effectively the instruments of EU nomothetic activity can design ends adapted for the provision of procedural justice patterns, and thereby shape normative contents based on territorial contexts, I don't believe it could be sufficient to face the problems tied to the use of telemedicine efficaciously. Without an adequate understanding of the cultural-anthropological variables involved in therapeutic relationships, even normative-procedural variations cannot engender or promote the use of criteria for trans-border coordination. Determining management schedules; aligning procedures of administrative authorization regarding health care interventions; adopting a large transnational scale featuring formally undifferentiated formats for the so-called informed consent; providing standards of retribution in cases of malpractice to be applied throughout Europe to healthcare professionals and structures through coordination among the national health services and the related assistance supplied to citizens; establishing uniformed devices relating to the responsibility of medical professionals and structures (e.g. transnational schemes for the contract of hospitalization): all of these measures will still not be enough to neutralize the relevance

[12] At the judicial level, see CJEU, judgment of 28 April 1998, Raymond Kohll, case C-158/96. ECLI: EU: C: 1998: 171, especially pars. 35–36.

[13] Also, within telemedicine, the longstanding issue of the so-called *Legal Transplants* takes place. For an analysis of this question, from an intercultural perspective, see M. RICCA, *Culture Interdette. Modernità, Migrazioni, Diritto Interculturale*, Torino, 2013, pp. 53–63, 164 and id. for further bibliographical references.

of cultural difference among doctors, patients, therapeutic approaches, etc., and its heavy weight on the modalities of approaching the care relationship.[14]

The *continuum*, the ecological relationship extant between the (diseased) body and the social/environmental dimension surely also calls into play bureaucratic activity and standards. To suppose that the systemization of these standards and regulations at the Communitarian level is sufficient to engender a *European uniform space for health care* is, however, an illusion in which only inter-governmental officers, from behind their desks, can believe… just to deceive themselves. Quite the opposite, as soon as one engages in a health care relationship, the unfeasibility of such a plan would be immediately understood. This is because in that moment would come the realization that conceptual schemes, patterns for the categorization of social experience as well as the diseased condition, are the ones that work as a hub in determining the coordinates for the applications and the concrete effectiveness of the above outlined legal parameters.

Take as testing ground medical responsibility. When is it correct to say that a doctor has misdiagnosed? The formal and institutional answer might be—and, ordinarily, it will almost surely use the following formula—if he does not abide by the medical protocols established for that specific pathology by the so-called *ars medica.*[15] But, as skilled as he is, the doctor making use of telemedicine has to deal with all the problems inherent in the necessity of dialoguing with a patient that a) is located and spends her/his life—for example—5000 miles away; b) uses schemes of representation with regard to her/his symptoms tightly imbued with the *folk* medical language of the place of origin; c) inhabits an environment connoted by the presence of idiomatic pathogenetic factors; d) has a particular way of living, and therefore manages her/his own life using behavioral habits that could be novel to the doctor, and so on. Together these factors can heavily impinge on the correct anamnesis of the disease status and, consequently, the probability of supplying a correct diagnosis. Then, in all the cases in which a doctor has to assess the meaning of equivocal or poly-semeiotic clinical data (that is to say data that could simultaneously serve as clues for a possible plurality of pathologies) the same interpretation of symptoms can be gravely undermined because of the language spoken by patients and the doctor's grasp of the related words, concepts and cognitive schemas. Of course, in all such cases one possibility could be collaboration between the local and the remote doctor. However, this would not solve all problems, rather it would merely recalibrate the crux of the matter onto the intercultural translation between the two doctors (even if it is not necessarily true that such shifting of the focus would make things easier, in the first place, from an epistemological point of view).

Much the same applies to the issues concerning care. A doctor who does not know the patient's life habits (from dietary to sexual, the relationships with various kinds of environments from housing to working conditions) could even prescribe, as a treatment, pharmaceutical remedies or modalities of medical intervention that are dramatically incongruent with the exigencies of the diseased person. This incongruence could range from an incompatibility between certain prescriptions and the patient's nutritional habits to the impairment of social positioning or one's own existential conduct as a result of surgeries or other kinds of healthcare treatments.

Then, as regards the so-called informed consent, difficulties risk becoming gargantuan. Taking into account all of the cognitive, religious, ideological, psychological, etc. differences of patients belonging to various, distant cultural contexts might prove to be an uphill battle. Nonetheless, the need to make the patient aware of what he is undergoing through her/his acceptance of medical treatment requires the doctor's ability to deal efficaciously with cultural/communicative variables. The alternative can be nothing but a misleading consent, only apparent, as it would be the consequence of choices only

[14] Even if it is gauged on the Western World and the cognitive/conceptual differences that can be seen in medical protocols, see the not recent but still instructive text of L. PAYER, *Medicine and Culture: Varieties of Treatment in the United States, England, West Germany, and France*, New York, 1996. From a diachronic point of view, an interesting survey on the variations of conceptual patterns used in medical thinking and practice can be found in J. K. CRELLIN, *A Social History of Medicines in the Twentieth Century: To Be Taken Three Times a Day*, Binghamton (NY), 2004.

[15] As for the legal parameters of medical responsibility analysed from the perspective of intercultural health care, see I. QUARANTA, M. RICCA, *Malati Fuori Luogo. Medicina Interculturale*, Milano, 2012.

notionally definable as truly self-determining. Needless to say, such a situation would also clearly have a serious impact on issues relating to privacy and consent concerning the use of clinical data. Besides, if a patient does not understand the meaning of the therapeutic action performed (allegedly) on his behalf, how can he be presumptively deemed to be aware and able to ponder the consequences of the authorization that he himself delivers to legitimate the management of her/his sensitive data (… concerning the same health treatment)?

In making these observations, I do not mean to say that a standardization of European legislation on the bureaucratic/administrative/procedural aspects of e-Health is entirely useless. Quite the opposite, I want only to stress that it is not enough; and that if such legal uniformity—assuming it can be accomplished—is considered to be sufficient and exhaustive, then it will engender only false hopes or, what is worse, a sort of smokescreen, capable of obfuscating a lack of mutual understanding and consent between doctor and patient regarding assumptions, procedures, modalities and the outcomes of therapeutic treatment.

Moreover, the above reflections are based on a specific assessment of EU politics with regard to e-Health. The critical issues focused on so far become sharper against the background of the networks of actions and efforts that EU institutions are carrying out to increase the dissemination of telemedicine. Their main concern seems basically to be addressing bureaucratic or legal standards, thereby demonstrating once more the serious anthropological-cultural deficit of analysis that can be found in all the attempts at political/social standardization led by European institutions.[16] However, e-Health and the perspectives for its adoption are not exclusively confined to European spaces and inter-spaces.

Problems with legal standards can be traced, for example, even within national contexts.[17] Let us consider the indispensable coordination between different regional and/or federal systems in the case of medical assistance supplied through e-Health. Within the national environment, difficulties of cultural adjustment are partly mitigated by the official use of a common language (or, at least, a language known by most of the population), as well as life habits whose cultural differences are somewhat limited. The scenario is quite another when the demographic landscape comprises cultural groups characterized by large cultural distances. Such a situation occurs in all the national contexts where the local population includes different ethnic groups, often because of historical factors tied to colonialism and its legacy. Something similar could be traced, moreover, in countries hosting substantial numbers of migrants. The presence of persons with different cultures within geo-political national areas is increasingly a constant, and creates both linguistic and intercultural problems. On this specific aspect I will elaborate further below.[18]

Hindrances to intercultural communications intensify, of course, if we consider the planetary horizons of telemedicine. These questions are not, however, abstract. Experiments in telemedical assistance from Europe towards Southern Hemisphere countries are currently underway.[19] Indeed, in light of such efforts, e-Health seems to work as an instrument of justice, providing a kind of emancipation lead by an instrument at our disposal to counteract the deep gaps that still mark a divide between the Northern and Southern regions of the Earth. The opportunity to assure adequate health care assistance also in deprived areas, affected by an endemic lack of health facilities; allowing people places in distant corners of the globe to enjoy the so-called "medical excellences" located in particular urban or scientific districts, in many cases as the only chance for survival; making possible a consistent reduction of costs that would otherwise be unsustainable for patients lacking economic resources; providing from afar health education, prevention, and pharmaceutical information about possible therapies: all of this creates an exciting perspective to say the least, if only because

[16] I have addressed the issues connected with this deficit more broadly elsewhere, so here I propose only a brief referral. See, on this topic, M. RICCA, *United Europe and Euclidean Pluralism: On the Anthropological Paradox of Contemporary EU Legal Experience*, in *Unio Law*, 2, 2015, www.unio.law.it.

[17] As for the Italian context, for a clear and well structured analysis, see C. BOTRUGNO, *La Diffusione dei Modelli di Cura a Distanza: Verso un "Diritto alla Telesalute"?*, in *BioLaw Journal*, 1, 2014, pp. 161–177.

[18] I. QUARANTA, M. RICCA, *Malati Fuori Luogo*, cit.

[19] For further information on these projects, see the SIT (Società Italiana Telemedicina) website, www.sanitaelettronica.it and/or www.medicinatelematica.it.

telemedical proximity turns into a synonym of *human proximity.*[20] Unfortunately, despite everything, the environmental and cultural connections of the body, including legal-institutional ones, work astride distance like a dark agent that hampers the achievement of purposes intrinsic to telemedicine. With respect to these problems it is totally useless to entrust the possible solutions to legal-bureaucratic strategies—like those adopted by the EU—in an attempt to engender operative backgrounds that, at least, do not prevent the activation of telemedicine devices. Barriers relating to the schemes of categorization concerning the body, disease, *ecological* relationships between physical and social-emotional dimensions of individual existence, and so on, that patients use and that deeply differ from the correspondent Western and bio-medical patterns, are far more difficult to overcome. Not least, religious universes often raise huge communicative and operational hurdles. A computerised trans-duction of bodies, unsupported by an adequate commitment to intercultural translation, could therefore produce dire consequences, dramatically jeopardising the promises and purposes of telemedicine.

Ignoring all such obstacles and instead assuming that technological capacity accompanied by legal regulation could provide total effectiveness in this area of healthcare, would be a fatal mistake. As already elucidated, barriers in the communication between doctor and patient can even have lethal results[21] and impair the very core of health care services and the whole bio-medical enterprise/approach. The plausibility of such concerns is borne out by an analysis of Art. 2232 of the Italian Civil Code, which interweaves its provisions within the telemedical context. This article titled, "Carrying out the work", also applies to medical services. The text is as follows:

> Art. 2232. *Esecuzione dell'opera*. Il prestatore d'opera deve eseguire personalmente l'incarico assunto. Può tuttavia valersi, sotto la propria direzione e responsabilità, di sostituti e ausiliari, se la collaborazione di altri è consentita dal contratto o dagli usi e non è incompatibile con l'oggetto della prestazione.
>
> Art. 2232. *Carrying out the work*. The subject undertaking the work must provide personally for the assumed task. He can nevertheless rely on substitutes and assistants under his direction and responsibility if the cooperation of the other is permitted by contract or custom and is not incompatible with the service to be supplied.

The first question that Art. 2232 raises in its connection with telemedicine concerns the personal features of the service. The article requires that the service must be provided "personally". Let us imagine, then, that a doctor and a patient play parts in a "telemedic event", such as a diagnostic examination or a case of telesurgery, and only one of them is located in Italy. Setting aside the issues tightly linked to private international legal aspects relating to the rules applying to the case[22], it is

[20] In this regard I would refer to J. DEWEY, *Democracy and Education: An Introduction to the Philosophy of Education*, New York, 1916. There, Dewey proposes an ecological vision of social relationships woven by people. He highlights how human beings, by virtue of their nature as symbolic animals, include in their existential environment phenomena and objects that are remote in space and time. These join the "ecological proximity" of each human being; phenomena and objects that are symmetrically and geographically/topographically near can become ecologically (and I add: chorologically) remote because they are not part of the existential circuit of each individual as such drawn by her/his ends, values, culture, etc. Dewey's pages envisage, almost prophetically, the semiotic connotation of space that today is made evident, inter alia, also by telemedicine and the possibilities it affords to transcend geographical-physical limitations.

[21] I addressed such problems in more detail in I. QUARANTA, M. RICCA, *Malati Fuori Luogo. Medicina Interculturale*, cit.

[22] As a general standard, transnational statements provide that the law to be applied to medical treatment is *lex loci*, namely the law of the place where the treatment is materially supplied. However, in the case of telemedicine, it is precisely this aspect (the place) that becomes disputable, or at least uncertain. Where are the diagnosis and/or the treatment processed? In all likelihood, at least in the EU area, the norm for such cases should be traced to the Directive 97/7/EC of the European Parliament and of the Council on the protection of consumers in respect of distance contracts, (replaced by Directive 2011/83/EU of the European Parliament and of the Council on consumer rights, OJ L 304, of 22.11.2011). If other countries outside of Europe are involved in

important to understand if and how Art. 2232 of the Civil Code might align with a scheme of healthcare and therapeutic assistance that gives room to the *cultural personality* of patients as envisaged by the Italian Constitution (Art. 32, 2, and 13). However, this point is relevant even from an international private law perspective because, whereas the constitutional standard might be violated, the foreign rules applicable to the case and compatible with e-Health could face the obstacle of national public policy on the way to their reception in Italy. But this would mean that the e-Health service could not be performed from or towards Italy.

The relationship of trust between doctor and patient is a fundamental element of medical services, particularly since it conveys communicative interfaces that are necessary for the performance of basic diagnostic activities and the processing of an informed consent. A healthcare system based upon the full respect for the person, her/his capacity of self-determination and freedom, pursuant to Art. 32 and 2 of Italian Constitution[23] (but it would be the same if we changed the focus to EU law[24]) could hardly acknowledge legitimacy to a "non-personal" service. Besides, the second part of Art. 2232 envisages the possibility of relying upon substitutes, assistants and auxiliaries if this is compatible with the nature of the specific contract, uses, and service. In the case of medical assistance, this possibility would seem, however, to be excluded, at least in all the cases in which the therapeutic alliance seems integral to care. Nonetheless, scholars profess that making use of e-Health services while fulfilling the requirement of "personality" is, nevertheless, possible. The argument relies upon the specific characteristics of technological support involved in telemedical assistance. Actually—many argue—the teledoctor is "present" in real time at the scene lived and occupied by the patient. Cases of

the telemedical service, the question seems, instead, to remain open: also because its solution depends on the international private law systems of each country and the scope of contractual freedom recognized by such system with regard to the law applicable to the case. Yet within the EU area and with specific regard to telemedicine, Directive 2011/24/EU of the European parliament and of the Council on the application of patient's rights in cross border healthcare, OJ L 88, of 04.04.2011, especially Art. 4.2., could be considered. This legislation, however, does not provide any directly applicable rule but rather leaves it to each member state to ensure intergovernative and inter-regulatory collaboration in order to face the problems of telemedical responsibility. Further questions concern, then, cases of privacy violations with regard to sensitive data, product responsibility for damages caused by malfunctions of apparatuses used in telemedical service, etc. For a recent overview on these topics that includes various comparative essays, see C. GEORGE, D. WHITEHOUSE, P. DUNQUENOY (eds.), *eHealth: Legal, Ethical and Governance Challenges*, Heidelberg-New York-Dordrecht-London, 2013. Also, with specific regard to the responsibility for telemedical services in the EU area, see. I. ANDOULSI, P. WILSON, *Understanding Liability in eHealth: Towards Greater Clarity at European Union Level*, in id. (ed.), pp. 165–182, 174–175.

[23] For non-jurist readers, the text of Art. 2 and 32 of the Italian Constitution follows below:

Art. 2. The Republic recognizes and guarantees the inviolable rights of the person, both as an individual and in the social groups where human personality is expressed. The Republic expects that the fundamental duties of political, economic and social solidarity be fulfilled.

Art. 32. The Republic safeguards health as a fundamental right of the individual and as a collective interest, and guarantees free medical care to the indigent.

No one may be obliged to undergo any health treatment except under the provisions of the law. The law may not under any circumstances violate the limits imposed by respect for the human person.

[24] See articles 35 and 3 of the European Charter of Fundamental Rights:

Art. 35. *Healthcare*. Everyone has the right of access to preventive health care and the right to benefit from medical treatment under the conditions established by national laws and practices. A high level of human health protection shall be ensured in the definition and implementation of all Union policies and activities.

Art. 3. *Right to the integrity of the person.*

1. Everyone has the right to respect for his or her physical and mental integrity.

2. In the fields of medicine and biology, the following must be respected in particular:

- the free and informed consent of the person concerned, according to the procedures laid down by law,
- the prohibition of eugenic practices, in particular those aiming at the selection of persons,
- the prohibition on making the human body and its parts as such a source of financial gain,
- the prohibition of the reproductive cloning of human beings.

emergency response in the event of accidents or disaster seem to be the typical situations in which this kind of "presence" takes place. Though "remote" in space, the doctor is "present" by his gaze, his instruments, even if it is other subjects physically on site who cooperate with him to actualize his intentions. In other cases, then, the assistant for telemedical services could be even the patient, as in remote health monitoring of people suffering from chronic disease. In the eyes of interpreters, such observations appear to be comprehensive enough to solve any problems gravitating around telemedicine, allowing for the emersion of the increased efficiency of e-Health with respect to traditional health care procedures and opportunities.[25]

According to these opinions, to say that the doctor "sees" the diseased body, "communicates" with the patient, "examines" remotely her/his clinical/diagnostic data, would seem to comply with the requirements established by both Art. 2232 of the Civil Code and Art. 32 and 2 of the Constitution. The combination of these provisions, respectively legislative and constitutional, seems therefore to put Italy (as well as any other countries having similar rules and principles) along an ascending path towards the implementation of telemedical care. In a sense, these provisions could produce a sort of indirect device to overcome and relativize the constraints deriving from sovereignty, opening both the physical and imaginary frontiers of each state to paths of political-legal connection departing from and projected by a body, precisely that of each virtual patient, which in turn becomes an icon of cosmopolitanism. "Disease and the right to good care do not know frontiers", it would seem fair to proclaim. The possibility of crossing borders and, even better, the right to overcome them to get care, of themselves sound like impressive ethical achievements, a great step along the path towards the humanization of international relationships. The question remains if and how seeing and communicating with the patient by virtue of a computer display satisfies the requirements provided by Art. 2232 with regard to professional services. In this connection, is it correct to say without a doubt that the requisite of "personality", when applied to medical services, merely implies the instantaneous or topical possibility to see and communicate? In other words, is the taking-over of a body, intended in its mere materiality, to be deemed sufficient? Or the therapeutic alliance established with a patient whose communicative possibilities are limited exclusively to the frame of a relationship doomed to remain jammed within a computer display? Can we be sure that the only space to be jumped over and dissolved is the physical-geographical space? Or, rather, just initiating form Art. 2232 of the Civil Code and its analogues in other legal systems,[26] should we examine more closely what exactly we define as "the body" when involved in a therapeutic relationship? And how should we treat the fact that the body appears as if it were both the beginning and the end, the source and the target of healthcare *ends*?

3. The body as a thing vs. the body as a relational process

The body, taken statically and as if it was an organism-object, is the epitome of the vital activities lying behind it and, at the same time, an outcome of them. These activities continually occur along the track and the sequences of its relationships with the environment. In a sense, they are the emergence, the implications of such relationships. Without air and respiration, the lungs would not be what they are, or rather they would not exist at all. The same could be said about the stomach with respect to food and the feeding process. Even the brain is no exception. Lacking environmental stimuli, it could not develop. The genetic code and its parts related to the brain, if deprived of their usual dynamic immersion in an ecological context, are without any consequences or effects, inert. This conclusion works also from a phylogenetic point of view because the human organism and its genetic information

[25] See, on this topic, Tarasco, *La Telemedicina per lo Sviluppo della Sanità nel Mezzogiorno* cit.; A. NARDONE, *Tutela della Salute e Nuove Tecnologie. La Telemedicina*, Napoli, 2005, p. 127 ff.

[26] Provisions similar to Art. 2232 of the Italian Civil Code can be found in many legal systems, where the discharge from the contract is regulated with regard to the cases in which the personal character of the performance constitutes an essential element of the contract and the fulfilment of its obligations. In all the cases that involve intellectual performance, qualified as such because of the specific competences of the person undertaking the service, the "personality" of such performance is considered to be an essential element of the contract. In this regard, a sort of general framework is supplied by the DCFR, article III. –3: 302, par. 2.

are a result of evolution, thereby they arise from the history of relationships between organism and environment.

What is useful and serves as an ecological framework to the body, from a dynamic-relational perspective, is also integral to it (where "is" is to be intended in a periphrastic sense). But if this is so, then telemedicine and its geographical projections are also to be considered to be included within corporeity. "Health" and "medicine" are synthetic expressions used to indicate the conditions and tools necessary for the organism to survive, as well as to ensure its own welfare, and overcome the challenges posed by the environment to its ongoing existence and activities. The body as a whole and every one of its parts, implicitly relate to a web of relationships with the environment that are vital to their existence, and to the production and safekeeping of their corporeality and their physical existence as entities of the world.[27]

All this means that the body topography, its "scans" and the way to weave its life relations among its various organs, draw in spatial terms, even thanks to the right to health, a political-legal geography that telemedicine is capable of widening tremendously—while ensuring a strictly temporal re-configuration of experience involving the body, disease and care.[28] However, this expansion does not concern only the physical-spatial dimension. The new geography of healthcare, urged by the exigencies of individual bodies, requires institutions to redraw the entire legal framework of corporeity, so relativizing territorial sovereignty as considered with regard to its value connotations, ends, and socio-cultural architraves. The body, if taken as a unified synthesis of experience, will be the result of such renewed legal and pragmatic interrelations. All together, they will be the driving force and, at the same time, the outcome of a new order of sovereignty. In order to achieve its own ends, and then to make *space* for itself, it is going to turn outward and hetero-integrate its contents, so as to engender an inter-space that comes from an intercultural translation among different legal-cultural languages. The pursuit of health, in other words, will utilize, as its means of achievement, spatial transposition and all the elements that connote the various involved (physical/experiential) spaces. That same pursuit will be refashioned, however, by virtue of its involvement in this new interspace. But such interspace is nothing but a new framework that finds the optical summit of its (even institutional) effectiveness precisely in the right to healthcare and its reticular implications through the experience orbiting around corporeity. In short, new potentialities of legal-spatial protection will change the "perception" of what "health" means. But this change, as in a circle, will modify the context of means, and thereby of the spaces, times, and instruments required to assure health.

With the advent of telemedicine, examining a body potentially in need of health care will be like looking at a geographical map, within which each organ will represent, almost metaphorically, the place where one can find the most skilled subjects and the competence to care for that body's afflictions. But there is more. Every organ and place (or places) will engender connotative proximities, new semantic implications, which, as such, will be joined in a unified space of experience, namely that of corporeity. In turn, the categorical space/spectrum will make visible physical, political, legal,

[27] In the vast literature on body and corporeality, their dynamic-cognitive aspects, and the process of embodiment of experience, I suggest here only a few references: B. FARNELL, *Dynamic Embodiment for Social Theory: "I Move,Ttherefore I Am"*, London-New York, 2012, R. W. GIBBS JR., *Embodiment and Cognitive Science*, Cambridge, 2005, M. JOHNSON, *The Meaning of the Body: Aesthetics of Human Understanding*, Chicago, 2007; K. SIMONSEN, *Encountering O/other Bodies: Practice, Emotion and Ethics*, in B. ANDERSON, P. HARRISON (eds.), *Taking-Place: Non-Representational Theories and Geography*, Farnham-Burlington (VT), 2010, pp. 221–239; C. SINI, *L'uomo, la Macchina e l'Automa. Lavoro e Conoscenza tra Futuro Prossimo e Passato Remoto*, Torino, 2009; E. THOMPSON, *Mind in Life: Biology, Phenomenology, and the Sciences of Mind*, Cambridge (MA)-London, 2007; S. TRNKA, C. DUREAU, J. PARK, *Introduction: Senses and Citizenships*, in id. (ed.), *Senses and Citizenships: Embodying Political Life*, New York–London, 2013, pp. 1–32; T. ZIEMKE, J. ZLATEV, R.M. FRANK, *Body, Language, and Mind*, vol. 1, 2007.

[28] In this regard, an important referral concerns the so-called m-Health, which can be considered as a sort of subclass of e-Health. It consists of the mobile medicine, today enabled by mobile technology. Its relevance emerges in all the situations in which an emergency response is requested; or, for example, when timely guidance from a distance, guaranteed by a remote doctor during the performance of a medical treatment—as in rescue operations—can actually save lives or avert irreversible damages.

economic, and communicative proximities that before now would have been inconceivable. The "remote" and the "present" as mirrored in the body will become co-topical, simultaneous, contiguous, drawing a new chorological dimension. It is, doubtless, a proximity made possible by the new cognitive and operative possibilities disclosed also by telemedicine. But the intercultural/inter-spatial encounter does not stem exclusively from the empirical-factual dimension of experience. Actually, at the regulatory level—national and supranational—the right to get the best care available worldwide is recognized, and works as a motor of inter-spatial and intercultural encounters that calls telemedicine into play, so as to engender new experiences that use inter-spatiality and interculturality as their own means.

At this point, it is about understanding whether telemedicine, with its advanced technologies and quick turn-around times, is capable of being responsive to the chorology of the human body and its intercultural transformation given the symbolic displacement effectuated by IT tools. In my view, a broad adoption of e-Health devices could be very perilous if it is carried out with no concern for the relatedness inherent to the body. In this regard, it should be emphasized that the form and the perceived thingness/materiality of the body have a merely epitomizing character because they synthetize the web of experiential and semantic implications underlying corporeal life. What we call the head, the stomach, the perception of pain and disease, etc., do not compose self-evident and universal truths, and above all they are not data that exist independently from culture or that can be processed regardless of our cultural schemes of categorization. The connections of sense in which the head, the stomach, the sense of pain, and the same experience of life and illness are nestled, foster and fill the connotative spectrum of what each human being sees, perceives, experiences, and calls "head", "stomach", "pain", and so on. Nonetheless, such connections are variable according to the ecological relationship between mind and environment, an environment that is more than simply the physical, the external, that which is presumptively placed *out there*. On the contrary, it is the synthesis of the symbolic and material elements included in the innumerable tracks of experience along with the related modalities of categorization.

All of this does not coincide with a bodily image displayed on a computer screen, however dynamic it may be, alongside the emerging flow of a communicative stream. Possible misunderstandings could be lurking at each step; moreover, they could tragically haunt the processing of the anamnesis, the diagnosis and all the opportunities for intervention and/or care. These risks are the shadow projected by the hidden side of the expression "personality of service" as related to the medical field. They are also the dark side of biomedicine and its reductionist approach and synthesis entirely focused on *thingness* and the alleged immediacy of corporeality. Instead, both these connotations should be understood as the outcome of processes of conceptual condensation that epitomize all the relations of sense (namely social, environmental, psychological, affective, etc.) placed at the doctor's disposal through his cultural knowledge.[29]

In any case, since I can imagine that such reflections taken alone might appear to be somewhat counter-intuitive and not decisive enough to call into question the breathtaking advances afforded by telemedicine, I will try to further elucidate their meaning in a way that is a bit unorthodox, but hopes to be efficacious.

4. Prehistoric art, comics and cognitive psychology: the chorological implications of e-Health

The body image rendered by the computer screen and the sequence of included technical information are the constitutive elements of telemedicine and, at the same time, its innovative aspects. In this regard, I think some questions should be posed. Are the innovations delivered by e-Health completely interchangeable with the tools and processes afforded and assured by the doctor's traditional diagnostic experience/practice? Is seeing a body inside a virtual frame *the same thing* as

[29] In this regard, S. DEIN, *Explanatory Models and Oversystematization in Medical Anthropology*, in R. LITTLEWOOD (ed.), *On Knowing and Not Knowing in the Anthropology of Medicine*, Walnut Creek (CA), 2007, pp. 39–53, but, even before, the essays published in A. M. BRANDT, P. ROZIN, (eds.), *Morality and Health*, New York-London, 1997. Moreover, I. QUARANTA, M. RICCA, *Malati Fuori Luogo*, cit.

examining it in real life? Is receiving the diagnostic data and setting up a discussion through the limited contingencies of an online encounter fully comparable to the doctor-patient relationship woven within a specific life context, one that is typically well known and shared by both these actors?

I believe the answer is no. That is, unless some measures have been taken in order to seriously confront and consider those aspects of the therapeutic relationship and the chorological-intercultural transformations that are coextensive to telemedical care. Otherwise, the image rendered by the computer screen will generate only an illusion of simultaneity and co-spatiality. Doctor and patient, each one living in a space-time warp that is "scanned" and forged by his own cultural habits, will actually experience different *spaces* and *times*. And perhaps, these could be reciprocally closed-off—in a "Babel effect" of sorts—precisely by the assumption that *virtual tools* have "nullified" all spatial and temporal distances (along with the related connections of sense, however), imposed by the *real world*.

To take a pragmatic approach, we can begin to ask ourselves what the doctor's path and efforts should be if he were called to supply his professional services on behalf of a long-distance patient without the use of telemedicine. First of all—I believe—the doctor should travel. And, however trivial this consideration might seem, it could prove to be rife with important clues regarding the issue at stake. Anyone who travels does more than simply dis-place his own (physical) body. Notwithstanding the innovations in transportation that render travel far less challenging and adventurous than in the days of Marco Polo or Columbus, space cannot simply be "skipped", or put in brackets. To get to his patient, the doctor must *traverse* the distance, move through it and make contact with everything that populates it. Such a task would already involve him in environmental, social, linguistic, architectural, bureaucratic, and innumerable other differences. He will personally experience these differences over time and through a global immersion in the various environments. In the doctor's consciousness a new idea of distance would begin to slowly make its way, precisely, a clear perception that distance is not only physical but also climatic, aesthetic, ethical, linguistic, and so on. Moreover, he will gain such an awareness through a continuous and inevitable comparison of the "contents" of this distance with his own environment and cultural habits. The patient would then represent a kind of final stop—also conceptual—of the journey. Furthermore, the patient (and his disease) will place himself within the overall context that is progressively traced by the trajectories covered to traverse space and its distances; a context fashioned and connoted by the transformations ensuing from the same experience of space. "Reading" the patient's body, figuring out his words, etc., would constitute, then, activities that are tightly integrated within the process of environmental repositioning faced by the doctor. At the first contact with the patient, the idea of having to cope with difference, somehow incrementally disclosed by the crossing of various kinds of distances, would function as an already acquired attitude. At that point, the travel itself will have engendered or otherwise suggested an understanding that the patient's body is an integral element to a web of relations of sense and experience different from those that are familiar to the doctor and molded according to cultural schemes different from his. So, the impression that *something else* beyond biomedical-therapeutic expertise is required to meet the patient's needs would come the doctor's mind automatically—or, at least, it would have a reasonable chance of appearing on the stage of his conscience.

Can we assume that an equivalent inclination to such cognitive adaptations will occur also in telemedical practice? That the awareness that the sick body is placed elsewhere could be sufficient to engender, inside the doctor's mind at least, a positive inclination towards environmental analysis, including both the material life context and the imaginary landscapes the patient has traversed in his life? Or, quite the opposite, is the telemedical image a sort of reduction-to-an-icon of the whole phenomenon of the "sick person", a phenomenon that is somehow freeze-dried and sclerotized so completely that it consists in a few drastically de-contextualized symbolic indices? And if that were true, how could this impinge on the efficacy of the "personal" service the doctor must supply? Or better, to what extent is the necessary "personality of healthcare service" impaired if we parameterize such requirements in the typical medical experience that has always implicitly included them as part of the traditional therapeutic standards?

To better illustrate the cognitive and conceptual gap between traditional and telemedical healthcare approaches if not supported or balanced by careful anthropological-intercultural training, we might benefit from a few examples deriving from an analysis of the visual arts.

In the prehistoric era, graphic representations made on rock walls draw a path across time that is not only artistic but also cognitive, providing traces of ancient times. In the earliest cave paintings, attributed by palaeontologists to the so-called Archaic Hunters (before 10.000 B.C.), isolated images of animals or other subjects are rarely found. The individual figure, framed and separated from the rest, does not seem to inhabit the cognitive-representational imagery of those humans. On the contrary, researchers have consistently ascertained, across the length and breadth of the world, the presence of choral or composite representations. The figures are accompanied by symbols and ideograms. All together these elements seem to speak, as if the individual elements were enunciative syntagmas, constitutive parts of logical-conceptual structures. However, the sets of figures and signs do not articulate unified scenes or episodes (interrelated series of events) condensed into synthetic images or shapes that work as icons evoking narrations having a beginning and an end, fixed and bound up with itself. Conversely, the logic underlying the cave paintings drawn by Archaic Hunters seems to shed light on webs of semiotic associations, "ideographic" rather than "pictographic" schemes[30], to wit: comparable neither with Platonic ideas nor with Aristotelian essences.

Fig. 1. Excerpt from E. Anati, *Origini dell'arte e della concettualità*, Milano 1988: Jaca Book

Such representational patterns—and this is where it gets really interesting—seem to be universal up until a particular epoch, almost as if they constituted a sort of common language for all of humankind. When, instead, at the time of the Advanced Hunters, the scene or episode began to replace the graphemic associations, the representations progressively began to vernacularize, and to take on specific idiomatic forms depending on the different geographical areas. Precisely when the iconic, synthetic figures superseded the sequential logic of graphemes mixed with images, so too did the relationships among signs become figurations, therefore no longer syntagmatic, but rather pictographic elements. They epitomized something that was taken as implicit, that is, the relationships constitutive of experience and its recurring patterns. The clarity of representations and their figurative concentration afford communicative immediacy, but only provided that those who are seeing the painting are already acquainted with their "mute parts", that is, the implicit or "*not said*" concerning the relational and indexical elements of the depicted scene.

[30] E. ANATI, *Il Museo Immaginario*, cit., pp. 28–29, argues, "Vi sono tipi di associazione che si assomigliano. L'animale raffigurato in una certa maniera nel contesto degli altri segni associati non riflette la realtà naturalistica come vorrebbe la nostra immaginazione di oggi, queste immagini si ubicano nello spazio della parete in modo ripetitivo, in base a delle impostazioni che dovevano avere un senso nel loro insieme, ma che non rappresentano il tipo di composizione, e il tipo di visione comune della nostra cultura contemporanea. Sembra ad esempio che nell'arte dei Cacciatori Arcaici non esistesse, salvo qualche rara eccezione, un concetto di base, o di piano di calpestio. I grandi animali sono sovente raffigurati sulle pareti delle grotte, come se fossero sospesi per aria. Lo stesso avviene in Europa come in Tanzania o nella Terra di Arnhem".

Fig. 2. Excerpt from E. Anati, *Origini dell'arte e della concettualità*, Milano 1989: Jaca Book

This stylistic passage marks a simultaneous cognitive and communicative transformation, which severs its links with the archaic past and its representative logic in conjunction with the end of the hunter-gatherer era.

Fig. 3. Excerpt from E. Anati, *Il Mueso immaginario della Preistoria. L'arte ruprestre nel mondo*, Milano 1995: Jaca Book. This image gives a sort synthetic representation of the passage from the archaic style to the neolithic one in the making of the cave painting. The giraffe was depicted on a subsequent occasion, as an individual and unrelated figure, defined in greater detail. On the contrary, the archaic figurations are very stylized and consist for 2/3 of graphems.

From that point on, cave art becomes more and more vernacularized, anchored to places and "cultural dialects". This "conceptual localization" had an effect that remains persistent and is experienced even today by paleoanthropologists. Effective interpretation of cave paintings apart from the most archaic, therefore, dating back to the Neolithic period, varies according to the cultural continuity and proximity between the observer and the examined figure. In other words, paintings placed in the West or in the East are easier to decipher depending on whether the paleoanthropologist comes from the same part of the World or not. The more the figurative concentration—and thereby the coincidence between concept and iconic representation—increases, the more the rate of cultural differentiation of the paintings and their meanings seems to widen. The figure/icon conceals, by taking

for granted the significant relationships inherent to experience. So, anyone who lacks the cultural knowledge coextensive to the "mute parts" of these figurative representations will be not able to puzzle out the sense of these semiotic condensations, unrelated individual figures, or self-bound scenes. Cultural Otherness, transmitted tacitly and unawares over the ages, turns into a "rocky bump" on the road of trans-epochal and trans-cultural understanding and communication. It marks a threshold of discontinuity, a cognitive hiatus between human beings inhabiting different spaces and times.

In a sense, the passage, the figurative-cognitive transition traceable from palaeolithic-archaic, as well as neolithic cave paintings could find an analogy or diachronic metaphor in the emerging sequence between traditional and telemedical medical practices. The body image rendered through the computer screen, and relating to spatially remote "scenes of sickness", resembles a sort of iconic reduction of the relations of sense experienced and interwoven by the doctor when he is dealing directly with the life spaces of a patient and his social environment, considered in both their symbolic and material aspects. The same difficulties that paleoanthropologists have with neolothic pictures placed in parts of the world different from their own could haunt the teledoctor's activity. Nonetheless, there is an important and somehow problematic difference between these two kinds of professionals. Paleoanthropologists tend to assume the psychological attitude of a person that must cross a temporal and cultural-spatial distance that is bridgeable only through decryption, thereby availing himself of mere hypothetical assumptions. Conversely, the teledoctor is inclined to imagine a sort of evaporation of spatial forking, empowered by *technology*, by the achievements of *progress*, and processes of *civilization*. His inability to understand spatial and cultural Otherness could be completely overshadowed precisely because of the universalizing abstractions typical of reductionist medicine.

Actually, taking a look at a range of telemedicine texts, including those that analyze the related legal problems, the cognitive discrepancies tied to the iconic reduction of therapeutic experience seems not to be of much concern. Even so, the interplay of crossed question-and-answer and cognitive co-construction that weaves through the doctor-patient relationship during the anamnestic, diagnostic, and therapeutic steps, takes shape through a sequential process that is both distributed over time and generative of experience. This is, specifically, the experience of care, the object of which is the dynamic and cooperative interpretation of the disease state, that the doctor has to carry out along with the sick person. Somehow, the voices of both the patient and the doctor, in their succession and subsequent condensation within diagnosis, represent something equivalent to that which in movies and comics is defined as the technique of "shot reverse shot". I believe a few comments and images can be useful to clarify and make more explicit the potential difficulties tied to e-Health and the dramatic psycho-cultural dangers that could result from their underestimation.

The technique of *shot reverse shot* originates in cinema, and is used by filmmakers to represent dialogue. To create the effect of a dialogue, two different, consecutive shots of the characters are filmed, and then edited together. The same technique can be used to show a character observing an object. The director shows the object first, and then the character, or vice versa. In order to make the technique effective—and this is the cognitive-cultural element inherent to such a technique—the two shots put in sequence must be coherent, and share a consistent "sense continuity". This continuity is established retrospectively by the spectators, as soon as they see the second shot. By virtue of memory, the viewer gives the sequence a unified sense, capable of transcending the diachronic sequencing of images and their appearance before the eyes. However, all this requires familiarity with the categorical/conceptual schemes involved in the realization of the shot reverse shot sequence. Otherwise, the use of this technique would be a complete and utter failure. It could, moreover, leave the spectator bewildered, leading him to deep misunderstandings that could be overcome only through the subsequent or previous unfolding of the movie and its plot—that is, thanks to the overall narrative context.

The *shot reverse shot* technique is also employed in comics. Furthermore, the cartoonish depictions seem to share a line of continuity with cave paintings and their representational styles, as illustrated above. Actually, a comic comprises pictorial figurations and words, therefore linguistic signs. In a sense, it is like a synthesis of cave art of both the Archaic and Advanced Hunters before, and the Neolithic painters, after. In drawn representations, the towering elements are the scene and the

figurative concentration, but not only these. The communicative efficacy of the comic relies heavily upon signs and the weft of relations of sense defined through the plot and its inner cross-references. Cartoonists use the *shot reverse shot* technique in a different way than filmmakers. They realize this shot/counter-shot effect by means of two consecutive frames, placed side by side—and, in this case, the analogy with movies is very close—but also within a single frame. Everybody will remember frames in which an action carried out by a character and the consequence of that action are given simultaneously, for example one character landing a punch and the other one falling down. Although in real experience these actions/events are necessarily consecutive, in a comic book they are shown simultaneously, concentrated in a single scene. Essentially, it is a figurative implementation of the same process the mind undergoes when it interprets *shot reverse shot* cinematographic effects. It is almost as if the single frame provides a retrospective representation, an iconized epitome of the interpretation/categorization of an experience distributed over time. However, if the image is understandable, in spite of the absurdity of the simultaneous presence of the cause and its effect, it is because this is the way our mind works: the mind of post-neolithic human beings.

A specific example could help to explain.

Fig. 4. Excerpt from R. Goscinny & A. Uderzo, *Asterix e il giro di Gallia*, Milano 2015: Hachette Livre/Mondadori (translated by Luciana Marconcini)

As we can see in this genius frame, drawn from "Asterix and the Banquet (*Asterix et le tour de Gaul*)", the little hero of the saga beats a Roman legionary by means of a cork popping off from a full amphora of sparkling brut. This scene is really extraordinary because it uses the *shot reverse shot,* exploiting the cultural/historical absurdity of the represented situation. Within one single frame the legionary loses his balance at the exact moment that Asterix pops off the cork. The sequence/connection here is both clear and simultaneously estranging, and this precisely because of the kind of weapon used by Asterix, which is completely inconceivable for the legionary. However, the meaning of the scene is fully understandable exclusively if the reader avails himself of the cross-references in the preceding frames:

Fig. 5. Excerpt from R. Goscinny & A. Uderzo, *Asterix e il giro di Gallia*, Milano 2015: Hachette Livre/Mondadori (trad. it. Luciana Marconcini)

The ambiguous semantic trans-colouring of the word "brut", undergoes a cumulative layering of re-contextualizations, it makes a sort of trans-epochal transition that hints at how much the figurative *shot/counter-shot* relies upon culturally pre-acquired meanings for its intelligibility. A clear interpretation of this scene would be very difficult if the cartoonists could not refer to the background knowledge of the reader about the typical characteristics of brut wine and the bursting effect that usually accompanies the popping of the bottles. In the absence of such a previous knowledge, the figurative concentration of *shot reverse shot* would not be understandable. In other words, the frame is a sort of static map of the represented event. And, like any map, it is not a reproduction of reality but rather the outcome of a process recombining experiential data by virtue of connotative selections and synthetic abstractions. What is shown within the frame is therefore a result of cultural, teleological, and communicative choices, as in any artefact.

Imagine subtracting the background knowledge that implicitly connotes Fig. 1. In this case, the *shot/counter-shot* effect suddenly vanishes. To make each "shot" intelligible, the cartoonist must convey a huge amount of information in a relational and narrative way. In this case, indeed, the unintelligibility would derive from the fact that the reader would not have at his disposal the conceptual/experiential patterns that would allow him to concentrate within an icon events or phenomena that in "real life" are distributed over time.

This last remark could be, however, at least partially challenged through a specific referral to the constructive techniques of the comics. They often provide as a criterion for drawing dialogues—or other scenes to be represented using *shot counter-shot* within a single frame—the alignment of the logic and chronologic succession of narrative events in the direction in which reading usually proceeds. To put it concretely, if within a dialogue a character talks first, then her/his speech bubble should be drawn on the left side of the frame, so that the reader going from left to right can see the image of that character and his/her speech bubble first; the other character, namely the interlocutor, and her/his speech bubble should be positioned on the right side of the frame. Of course, this pertains to Western and other cultures that read from left to right; it should necessarily be changed in the case of cultures reading in the opposite direction. In any case, if the *shot/counter-shot* effect were

considered as the other side of the coin with respect to the left to right sequence, then the simultaneity of representations would shatter. Instead, beyond the figurative appearance, a diachronic element would be at work. Its operativeness would be assured by the interactions between the text and the reader, and embodied in the gesture of reading or, even better, in its sequential proceeding from left to right.

Nonetheless, the above objections can be sustained by observing that simultaneity is present inside the minds of those who read regardless. And it is so just at the moment when the reader realizes the sense of what is happening in the frame, statically represented. In other words, what allows for the *shot/counter-shot* effect to work is the semantic congruence of the image, the consistent consequentiality and coherence of what is observed before and what is seen after. Besides, such a semantic congruence is the result of a retrospective processing. Only relying upon that which is read before, indeed, can the reader grasp the sense of what he reads after; and, vice versa, only on the basis of what is read after, can what is represented before, namely on the left side of the frame, efficaciously convey its meaning. It could be sufficient to put together in a single frame two figures and speech bubbles that are incongruent from the semantic-cultural point of view to achieve a double-vanishing effect. Not only would the coherence of the *shot/counter-shot* evaporate, but also the consistency between the spatial-temporal sequence allegedly inherent to the direction of reading, and the figures actually represented in the frame. This consideration can be verified, in a contrastive way, by a frame taken from another episode of the Asterix saga:

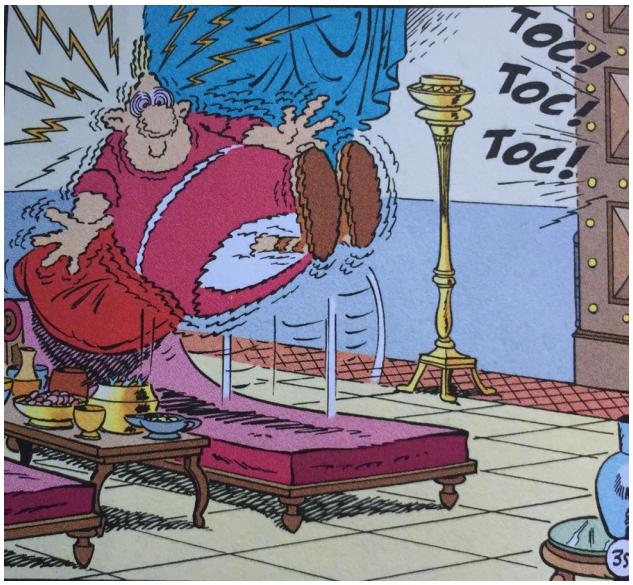

Fig. 6. Excerpt from R. Goscinny & A. Uderzo, *Asterix e il Regno degli Dei*, Milano 2015: Hachette Livre/Mondadori (translation Luciana Marconcini)

We can easily observe in this frame that the chronological sense of events does not follow the left to right direction of reading at all. Someone is knocking on the door and the Roman, until that moment sprawled on the triclinium, jumps up in fear. The door and the sound of knocking, despite their chronological and logical priority, are represented and positioned on the right side of the frame, meanwhile the Roman, and his reaction, are placed on the left side. The scene is clear and perfectly understandable…provided that the reader is already acquainted with the reasons why the Roman is "jumping up from the triclinium", and with the use of lightning bolts around the character's head to indicate his feeling of fear. Otherwise, also in this case, a correct interpretation would be really difficult to achieve without a prior understanding. The narrative recounts how the Gauls try to terrorize the Romans in a series of intimidating-dissuasive actions. Their goal is to force the Romans to vacate a giant apartment building that Caesar had wanted to build beside their village to sabotage, with the alluring proximity of "civilization" and its consumer-driven mermaids, the Gaul's resistance against colonization.

This frame too shows how the efficacy of *shot reverse shot* depends on the mind and its ability to manage the "not said" and the iconic condensation of sign relationships. A sort of polyphonic implementation of this attitude can be further traced in the following frame:

Fig. 7. Excerpt from R. Goscinny & A. Uderzo, *Asterix e il Regno degli Dei*, Milano 2015: Hachette Livre/Mondadori (trad. it. Luciana Marconcini)

Here, we can find neither direction nor sequence in reading. The image is polyphonic, omnidirectional and synthetic. It represents the final action through which the Gauls succeed in dislodging the Romans from the apartment building. The (intelligibility of the) scene plays on the contemporary reader's familiarity with the architectural structure of such buildings, their apartments, etc. Once again, simply by erasing this background knowledge, as well as the narrative context, the frame becomes almost incomprehensible. Imagining such kinds of subtractions of the implicit might seem to be merely an artificial hypothesis oriented to surreptitiously break the "natural normality" of the representation and its easy, immediate intelligibility. However, n*ormality* and *intelligibility* are in turn the result of an artifice—to be intended in its etymological sense—because they are one with the *cultural nature* of the artefact that is the comic book. Cartoonists avail themselves of a communicative action based on their "knowledge of background knowledge" and the cultural habits of readers. It is almost if this background knowledge becomes an integral part of the narrative form and conflates with the contingent scene/episode.

In practice, however, no one concocts intelligibility and its cultural devices. Culture undoubtedly works as the orchestrator of all communicative relationships, but it does not act by planning artefacts oriented towards efficacious communication. Experience can surprise us, put us face to face with phenomenic sequences that do not fully correspond to predetermined scenes and icons that are immediately intelligible. This circumstance becomes almost endemic wherever individuals from different cultures have to coexist. *Shot and reverse shot*, if embodied by different subjects having different cognitive and behavioural schemes, end up engendering shattered, incongruous contextualities and indecipherable simultaneities, as if the individuals involved in the "life frame" belonged to different times and places, but above all were doomed to continue living within them.

E-Health runs a huge risk of coming across such situations. Within the "frame" that is the computer screen, the view of the distant patient, as well as that of the remote doctor, can foster the conviction that they are the equivalent of a static, instantaneous, dialogically-dried and concentrated

representational icon of the medical action and the situations concretely and personally lived by the actors of the therapeutic relationship; rather, simultaneity can work even as a cause of misleading representations and misunderstandings.[31] Because of its visual "evidence", virtual reality performed by telecommunications facilities could suggest that the "fact" or the "body" to be examined is exactly the same condensed within the *hic et nunc* transmitted by the computer screen. The surrounding environment, both material and imaginary, would remain thereby overshadowed by the glaring obviousness and "presentiality" of the virtual image, a device capable of producing a proximity that miraculously annihilates time and space.

To realize how difficult it can be to interpret the figurative artefacts creating simultaneity between distant locations with ecological awareness, it could be useful to turn once again to comics.

Fig. 8 and 9. Excerpt from S. Tulipano, S. Dossi, *Zio Paperone e il tesoro più grande del mondo*, in *Paperino* n. 347 – May 2009, Milan: *The Walt Disney Company Italia s.r.l.*

In the above two frames (Fig. 8 and 9), *shot reverse shot* is seen in two images in sequence. However, this illustrative/narrative technique is employed to represent two situations that are not consecutive but rather *really* simultaneous. It is clear, however, that the sequential distinction here is merely an artifice. Rather than concentrate the space for representations according to the unitary time of the figured event, the distinction widens and differentiates it. This figurative strategy allows the cartoonists, however, to show and communicate the simultaneity of two events that are reciprocally distant in space. The effect is reached by virtue of the ubiquity of trans-framing speech bubbles, which make it so that characters say exactly the same words within the "same space-time", that is, into the same "chorological unit". But it is up to the graphemic or discursive elements of the frame to provide an intelligible simultaneity. It would be sufficient to erase the speech bubbles for the coupling and the consequentiality of the two frame to become incomprehensible or, at least, amenable to an infinite number of interpretations.

The same effect of "sequenced simultaneity" is quite spectacularly achieved in another couple of frames drawn with extraordinary ingenuity.

[31] On this topic, a very inspiring reading has now become a classic, E. GOMBRICH, *Art and Illusion: A Study in the Psychology of Pictorial Representation*, Princeton, 2000. See, furthermore, for a cognitive-intercultural and historical reconstruction of the prospective representation in arts, H. BELTING, *Florenz und Bagdad: eine westöstliche Geschichte des Blicks*, München, 2008; id. (C. H. BECK VERLAG trans.), *I Canoni dello Sguardo. Storia della Cultura Visiva tra Oriente e Occidente*, Torino, 2010.

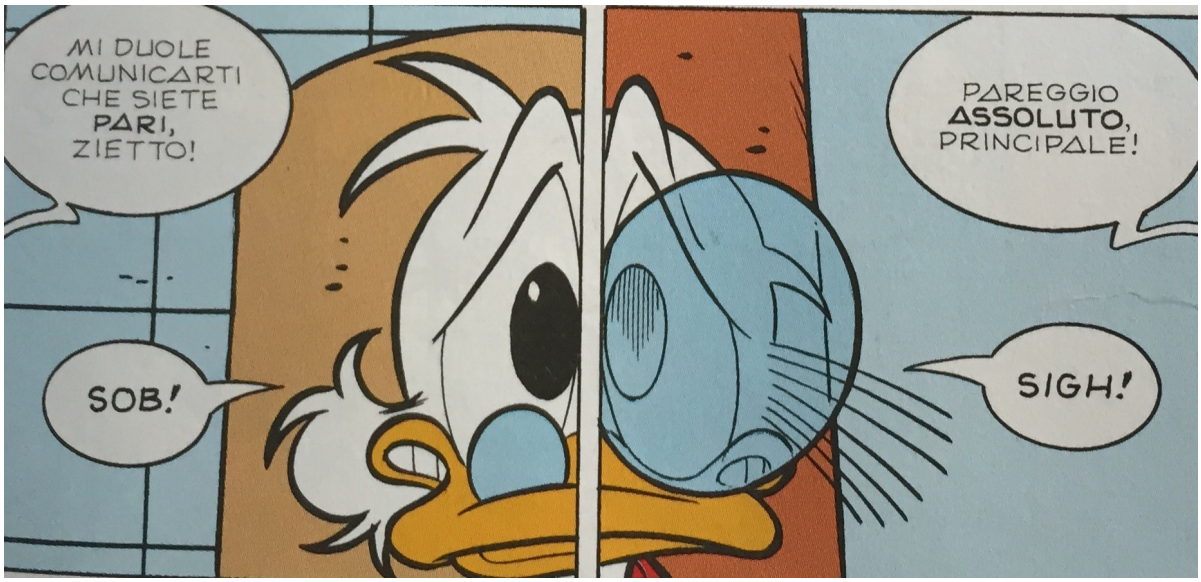

Fig. 10. Excerpt from B. Concina, F. D'ippolito, *Zio Paperone e la quarta stella*, in *Le più belle storie Disney in Cucina*, Milano 2014: *The Walt Disney Company Italia s.r.l.*

In this kind of double-frame (Fig. 10), the simultaneity of the scenes and their spatial distance are rendered through a *shot reverse shot* consisting in the juxtaposition of two frames forming a single aberrant figure: that is, a face resulting from the combination of two half faces, one beside the other. In this case, the speech bubbles clarify the sense of the figuration only a little. The absurdity of the combined image before the reader annihilates the consecutiveness, but at the same time makes its meaning almost unintelligible. Without knowing the whole narrative context, it would all appear at the very least enigmatic. The story of the comic recounts a competition between two restaurants run by two perpetually contending multimillionaires—Uncle Scrooge and Rockerduck—who as entrepreneurs-restaurant owners, are battling to obtain the fourth star in the quality ranking, each at the expense of the other; the competition will be won by the contender with the highest number of restaurant clients. As soon as the narrative context is explained, the meaning of the double-frame becomes clear. If this is the case, however, it is only because the above composite image epitomizes and translates in visual terms an extensive web of relations of sense that unwinds through a narrative plot that is quite broad and open. However, such semiotic breadth will not exceed the borders of the background knowledge of the potential readers too much. Otherwise, without a previous or complementary activity of intercultural translation, the reciprocal trans-position and the visual concentration between two different, spatially remote events/places could become inefficacious or, even worse, damaging.

Unfortunately, in the case of telemedicine what can occur is similar to what is seen in the frames above. In fact, the telemedical image of the patient would be complemented by a modest set of discursive elements, barely more substantial than the speech bubbles of comics, but designed to explicate the entire context populated by the situations and experiences that, through space and time, the therapeutic relationship should call into play. If the doctor and the patient belong to distant spatial-semiotic circuits, medical anthropologists strongly emphasize how the condition of disease is to be considered and treated as the result of an effort of co-construction that is cooperatively accomplished by both subjects involved. When the paradigms of sense and experience are culturally *remote* it is absurd to think that communication could be carried out through a sort of direct mind transfer of information. It would be even more inconceivable that this transfer could take shape through the simple unilateral pronunciation of a few words or the making a few gestures.

Making a diagnosis is a process within which the body is to be taken as a space-time map. A medical semiosis is also an ecological semiosis. A diagnosis is projected into the life environment of the patient through the doctor's anamnestic efforts. A specific symptom, topographically placed in the body, is the emersion of a phenomenon resulting from complex and reticular relations interwoven both inside and outside the organism along with a process of adaptation to the environment and its

stratifications. Such a symptom is, at the same time, an epitome and a translation, which concentrate in themselves a plot of events and connections that is to be traced in view of the construction of the diagnosis for the case, that is, the interpretation and categorization of the symptom within a categorical-conceptual scheme.[32]

Medical anthropology stresses the need for an effort of co-construction to be carried out cooperatively and creatively by the doctor and his patient. Actually, without such an interpretive convergence, this therapeutic alliance could fail dramatically. But the result could be a severe deficit with respect to the efficiency of healthcare and the prospects for its inclusion in a therapeutic path perceived to be significant to (and therefore complied with by) the patient. Commitment to co-constructive communication, however, helps to do more than simply avoid the excesses of reductionism and thereby the tendency to track only a physiological cause of disease always and in all cases. Looking at the other side of coin, co-construction allows doctors to recognize the etiological chains that have their roots in social situations, and the way in which these are represented and lived through processes of socialization and the ecological interrelation of corporeity. More simply, I do not believe that co-construction serves only hermeneutical and psychological purposes, as if the objectives, paths, and assumptions of biomedicine, taken in themselves, are to be considered immune or separate from the practices of communication between doctors and patients. In many cases, the lack of a proper approach to the cultural habits and cognitive schemas of patients, to the sense of their narratives, can instead undermine the doctor's diagnosis and its results. The activity of co-construction does indeed concern the intrinsic ends of biomedicine. In view of them, doctor-patient communication qualifies as a form of participation that is absolutely indispensable because it is a means to dynamically connect knowledge and cognitive patterns that previously were reciprocally isolated and remote. If interplayed, these factors can engender new cognitive landscapes across the dynamics of the therapeutic relationship, within which what is far will match what is near. In this way, and pursuing the specific purposes of care, new patterns for medical (but also human) experience and knowledge can emerge.

Without such participative and co-constructive coordination, the proximity afforded by telemedical devices would become, ineluctably, inoperative. Further, this outcome is almost certain if the doctor does not realize that his ecological-cultural framework as well as his patient's, must be questioned in order for them to emerge and become an integral part of the therapeutic relationship and its cognitive paths. The cooperativeness of doctor-patient communication and the "personality" of medical services thus appear to be coextensive, not least because there could be no participation without personal interaction, nor personal involvement without participation. The "personality" of medical assistance, in short, implies a pro-active disposition to shape new universes of experience and communicative environments, both of which will produce yet another environment, if compared with those articulated and lived by the doctor and his patient in their respective pasts.

Precisely because e-Health represents a sort of upheaval with regard to many traditional therapeutic patterns and the related cognitive habits, it brings to light in a very salient fashion the pivotal importance of an ecologically intercultural approach to the medical care of persons who are located remotely. The ignorance or lack of awareness of their environmental conditions, what might be their customs and existential habits, the related pathogenetic contexts, etc., could impair not only the co-construction of the "disease/illness sense" but also the diagnostic assessment and its results. The importance of what is beyond "*here*" and "*now*", namely the *presentiality* of the body under observation, is grossly evident in the telemedical context, and this is precisely because distance—though predominantly declined in a geographical sense—features distinctive axes. However, as noted above, the environmental distance has not only physical features, but also semiotic, cognitive, cultural, and so on. And, indeed, the observations just made with regard to the remote patient, made virtually close by e-Health, apply also to the foreign patient or, indeed, even local patients who share cultural habits with the doctor, but have undergone existential experiences or "stories" that are out of the ordinary—all this without wishing to minimize how every patient, every human being, has his own

[32] With regard to these anthropological-intercultural aspects of medical activity, I refer to I. QUARANTA, M. RICCA, *Malati Fuori Luogo*, cit., and the further bibliographic referrals in that text.

story. For the doctor to have an ecologically sound approach to the foreign patient he must be prepared for hermeneutical journeys toward remote *spaces of sense*. This is the only way he can contribute along with the patient to create a semiotic and experiential inter-space that can allow an efficacious coordination of diagnostic and therapeutic efforts so as to increase the chances of recovery.

Both telemedicine and intercultural healthcare show a common constellation of problems that orbit around the proper recipe for making the tacit, or unknown newly visible and significant,[33] but not less constitutive of both disease/illness and care experiences. This critical kernel coincides with the need to make sure that the *space* of therapeutic contingency is understood, and then uncovered as something coextensive with the connotative, relational *space* lived by each actor of that contingency—that is, both the doctor and the patient. It must be so because the *space* of the healthcare encounter is an effect, an emergence of the interplaying between two whole phenomenic/semiotic paths. A reference to comics can help, once again, to make less counterintuitive what has just been outlined. To avoid dangerous mistakes, an efficacious practice of telemedicine, as well as a non-virtual intercultural practice of e-Health, should avail themselves of the same cognitive processing underlying the structure of comic frames. Apart from the visual dimension and the virtual or physical proximity, the teledoctor should endeavour to trigger a semiotic, graphemic and dialogical development of the element surrounding "the body on the screen". Looking beyond the mere image and the morphological appearance of the words spoken by the telepatient should be understood as an imperative that is inherent to such medical practices.[34] The meaning and the nature of the single disease does not inhabit the mere symptoms or the "topicality" of the body, but rather comes from and includes the entire life plot of the patient and her/his organism. Retracing such "stories" requires specific skills, preparatory endeavours, and a complementation between medical and cultural anthropological knowledge. Otherwise, the dictatorship of the image—a direct consequence of its absolutization—in turn supported by the illusion of a complete proximity[35], runs the risk of engendering situations of cultural dominance that are doomed to result, ultimately, in medical malpractice.

As in the magnified comic speech bubbles, or in the relational graphemes of the prehistoric cave art, the dialogical-narrative apparatuses should accompany, frame, and sometimes even precede the activation of telemedical *channels*. The patient's image and its actual proximity would be doubtless empowered, transfigured and repositioned within an ecologic-semiotic landscape crucial to rooting out pathogenetic tracks and, through them, the proper diagnosis and therapeutic intervention able to provide effective treatment.

Across the spectrum of doctor-patient relationships, the body would increase its processive connotations, thereby becoming the source and motor for the emersion of new inter-spaces of experience and chrological dimensions. The ongoing interweaving of various universes of sense, spaces, subjects, and objects would give rise to global semiotic dynamics, which would *ferry* across the geographical and cultural distances innumerable features of social action and their legal aspects.

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[33] See the essays included in LITTLEWOOD, *On Knowing and Not Knowing in the Anthropology of Medicine*, cit.

[34] ...but not only. This discourse can be extended to every situation in which individuals with different cultures come into contact or when the life environment causes human beings to face unexpected circumstances. On the semiotic-relational approach to the categories and for an explication of philosophical, anthropological and psycho-cognitive references, see M. RICCA, *Intercultural Law*, *Interdisciplinary Outlines*: *Lawyering and Anthropological Expertise in Migration Cases: Before the Courts*, In *Rivista dell'Associazione italiana di Studi Semiotici*, 2014, pp. 1–53, www.ec-aiss.it; id., *Culture interdette,* cit., p. 84. See, furthermore, at least the two following authors: C. S. Peirce, *Collected Papers*, free download on web at https://colorysemiotica.files.wordpress.com/2014/08/peirce-collectedpapers.pdf; G. LAKOFF, *Women, Fire and Dangerous Things: What Categories Reveal about the Mind*, Chicago, 1987.

[35] Once again, the reading of Gombrich's, *Art and Illusion*, cit., from the first pages, can help tremendously in understanding the parallel asymmetry between the obviousness of images, considered in their empirical and morphological appearance, and the cultural schemas that are indispensable "to (even physically) see" them, on one side, and the anthropological contexts respectively lived and inhabited by the doctor and patient involved in the telemedical relationship, on the other.

5. *e-Health and the Earth as a legal inter-space*

There are many applications of telemedicine and each of them, on account of its particular characteristics, can lead to different legal chorological concerns. A few specific situations can help demonstrate more clearly the very relevant legal implications resulting from the use of e-Health.

The first issue to examine relates to medical responsibility. From a semiotic point of view, the virtual images of a body show a sort of spatial or chorological *excess*. They relate to an ecological background that is likely to be replaced, however, by the background(s) the doctor is accustomed to refer to when he sees patients who live in his own geographical or cultural area. The body's telemedical image—as in Neolithic paintings or modern comics—if taken alone, in an unrelated way epitomizes and condenses wide webs of sense and environmental connections. Therefore, the tele-doctor might be led to "unroll" the narratives inscribed on and inside the patient's body following coordinates of signification that do not meet those actually trod by the patient along her/his experience. The immediacy of the remote image could, in short, end up misleading the medical assessment. The apparent evidence and proximity of that image could stimulate and facilitate the superimposition of interpretative schemas that the doctor learned and used within his own usual environmental context. The semantic and geographical (in a word: chorological) excess of the telemedical image could give rise, therefore, to serious misinterpretations. This eventuality could be liable to transform the erroneous translation of factual data and symptomatic indexes into corresponding and likewise wrong diagnostic schemas, scientific hypotheses, and therapeutic courses. When the doctor analyzes clinical data, unless it consists in completely unequivocal symptoms or test results, he could go down an erroneous pathogenetic or etiological path precisely because of insufficient knowledge of the patient's life environment. "Decoding" the pathological landscape following improper interpretive patterns leads very often to translations and diagnosis that are dramatically off-target. All this occurs because the doctor tends to project, even unawares, cognitive biases upon the disease/illness situation, that is, prejudices due to the a priori adoption of schemes of pre-conceptualization. On the other hand, not being on-site and using computerized systems that produce a particular communicative concentration and timeframe could encourage a sort of blindness with regard to the possible indexes of disambiguation, launching the doctor towards a view featuring inadequate diagnostic and therapeutic patterns. The question that arises in these cases is whether or not the semiotic excess of a virtual image can be, when misinterpreted, a source of medical responsibility.

I think that the mere possibility of the occurrence of such dangers could serve as a decisive disincentive to the use of telemedicine in the eyes of many doctors. This is both a viable possibility and, doubtless, a heavy loss. Identifying the limits and problems tied to e-Health implementation does not mean it should be demonized. Rather, a thoughtful recognition of its chorological/cognitive concerns can help us to devise possible remedies to avoid the diagnostic-therapeutic mistakes resulting from a misuse of its potentialities. It is also true, however, that the urgency to look for these remedies will increase as the inefficiencies, according to the official standards required for medical services, are at risk of being a source of malpractice.

But just on the professional responsibility front and once again in the "personality of medical service" context, the crucial chorological connotation of telemedicine resurfaces. In a way, we can say that within telemedical services, the computer screen works as a sort of interface between different worlds, a device capable of transferring the connotations of each of them into the *space* of the other. Using a different metaphor, we could say that through the contact surface afforded by the virtual body, it is as if the borders of two separate figures suddenly vanish, so as to determine a complete reconfiguration of the elements and connotations that previously shaped each of those figures. If only for heuristic purposes, let us think of Fig. 11 above, and more generally, of the *shot reverse shot* techniques. The unification within a single figurative frame of different temporal and spatial sequences draws a new, hybrid (but, maybe, it would be better to say, *condensed*) space, where every previous element can assume very different meanings from those produced by a segmented representation. However, frames of comics presuppose a background conceptual scheme that is prefigured by the cartoonist and the scriptwriter on the basis of their knowledge of their readership and their already acquired cultural competences and categorical schemas. Somehow the intelligibility of every frame is

a (relatively) presumed result, which is culturally underpinned and pre-ordered since it follows well-worn tracks of signification that find a condensed synthesis precisely in the figures drawn within the frame. Such pre-codifications and communicative optimizations are instead lacking in real life as well as in virtual medicine. When categorical universes or different environments come into contact, perhaps conveyed by persons on the move, something new and unforeseeable happens, something that *has yet* to be iconified or reduced into a condensed concept. For this to be accomplished, a selective and creative translation of those universes will be required. However, there is no guarantee that the final result will be achieved, nor is there the possibility to predetermine what it will be.

Through the computer screen, telemedicine provides a pathway of communication between discursive universes and webs of sense that until that moment has never undergone a process of iconization or mutual categorization in the context of remote healthcare. The images of both the teledoctor and the telepatient are—in figurative sense—aleatory (comic) frames, contingently engendered along coordinates that cannot be preordained. Their meaning, therefore, dwells on the horizon rather than behind and/or before the spatial and temporal frame of the computer screen and the process of understanding and translation to be undertaken between doctor and patient. Both these subjects can only ascertain the "fact" emerging from the encounter and the "nature" of the disease *retrospectively*. This "fact" (taken in the etymological sense of "made", from Latin *facere*) will be a construction, or rather a co-construction, to the extent that the communicative efforts of the actors lead to personal and bilateral participation, the core of the therapeutic relationship. Telemedicine should combine the visual potentialities of IT devices and the cultural aspects of healthcare services. If this occurs, within the new, semiotically enriched image produced by telecare, all the therapeutic elements will be remoulded as a consequence of an inter-spatial trans-lation process. This is because through e-Health, the spaces and environment of both doctor and patient conflate, shaping an inter-space that is, at the same time, a new semiotic-relational *continuum*, a new context of signification.

Medical responsibility issues can be very intensively influenced by such a chorological reconfiguration. The standards for a proper delivery of medical services (including anamnesis, diagnosis and therapy, on one side, and the absence of malpractice, recklessness and gross negligence, pursuant to Art. 2236, Italian Civil Code, on the other)[36] should be properly coordinated to the specificities of e-Health. For this purpose, the law should take into account what actually comes into the teledoctor's range in the shadow of the electronically displayed body. Any and every judgment on his work should imply, therefore, a previous filling of the category of "legal responsibility" as applied to the teledoctor, with meanings, data, standards, circumstances, linguistic-communicative features, background knowledge, etc., in many respects different from those characterizing the geographical-cultural environment of national or local healthcare professionals. Indeed, medical services and related issues of responsibility cannot be configured as if the remote patient belonged to the same geo-cultural circuit as the teledoctor. This, simply, makes little sense, if for no other reason that it negates the very strength of telemedicine: that is, its ability to overcome spatial borders.

The above remarks regarding medical responsibility concern many applications of e-Health. One example is the use of cameras for the telemonitoring of patients affected by chronic diseases. The privacy issues, in these cases, obviously become sensitive and difficult to address. However, their assessment and related solutions cannot be divorced from a commitment to translate meanings and experiences across different physical-cultural environments: this means making an effort of inter-spatial and intercultural trans-lation that will engender, in turn, a new chorological (spatial/connotative) *continuum*. The patient's home and the doctor's studio will represent, then, a unified environment—at least, as regards certain cognitive and experiential potentialities. Such a unification must not be merely material or visual. Where and how the doctor casts his gaze through the camera must be considered as variables that depend on a balanced adjustment between the exigencies of both privacy and care, taking into account the particular modalities of space categorization and use

[36] Art. 2236 of the Italian Civil Code. *Seller's Responsibility*. If the performance in question makes it necessary to overcome complex technical difficulties, the vendor (*prestatore d'opera*) will not be held accountable for any consequent damages of faulty performance, except where intentional wrongdoing or gross negligence are involved.

that each patient follows. There can be nothing absolute or universal in this. A single space can be lived and configured in completely different ways, and this diversity is likely to have implications even for health telemonitoring and its legitimate use. No one should suppose that a Western doctor could *look* inside the home of a Muslim, a Chinese person, or an Indian, using the same access key or respecting the same prohibitions as if he were telemonitoring a Western home. This would be a colossal mistake. Under these conditions, the possibilities of a misunderstanding or a refusal of telemedical services would be highly likely. This discourse, however, could be extended further to patterns used to interpret the gestures of people at home, the sense given to spaces and the dynamics of movement within and across them.

In any case, what arises from the above considerations is the importance of the right to health as a geographical and cultural interface if and when it joins telemedicine. By virtue of such combinations between rights and IT tools, spaces that are distant both geographically and semiotically, along with their contexts of sense, move across the borders of legal sovereignty, reconfiguring the conceptual categories of state law and filling them with new projections of sense. It is almost as if a third space takes shape, not so much absorbing all other prior spaces or those previously separated, but rather as a new kind of collateral, posed beside them and working as an interface of connection and translation/transformation within a new chorological dimension. Another relevant profile, regarding again the "personality" of medical service, concerns tele-surgery and the related use of advanced robotics. In some respects, the doctor who avails himself of a robot to make a surgical treatment at a distance seems to radically exclude the personality of any service, and this would seem to be endorsed by the actual modalities of tele-surgical treatment. Furthermore, the difficulties of web connections and temporal lags, sometimes caused by the time needed to transmit data, tend to deter interventions in real time. For security reasons, therefore, the telesurgeon usually makes a recognitive mapping of the patient's body, and then prepares a computer program for the surgical procedure according to pre-determined schemes that are transmitted in advance to the computer/robot performing the surgery. At the patient's location, a team assists the remote surgeon. They will control the implementation of the programmed procedure and be prepared to intervene in the eventuality that something unexpected happens. In any case, they would be guided by the remote surgeon in his role of primary responsibility for the surgical procedure. Under these conditions, the requirement of "presentiality"—taken as simultaneity and spatial proximity—would seem to be excluded. However, I do not fully agree with this approach. After all, robots and the Internet are instruments, means, prostheses of the doctor's mind, playing the same role as a scalpel or other tools used to interact with the patient's body. Any eventual mistakes resulting from a malfunctioning of the robot or of the tele-transmission are integral parts of the new environment, the new communicative and/or operational space shaped by the use of telemedicine. Such a different perspective implies a renewed ecological reading of nature/culture relationships, capable of overcoming the traditional medical/epistemological schemes and updating them. If we consider the robot-computer as equivalent to a scalpel, an electroencephalograph, or a heart monitor used during a surgical procedure, then telesurgery only represents a different way to configure the relationships between mind and world. More specifically, this means that telemedicine adds something into the dimension of the "human" and the "personality" of *her/his* action, maybe because of its unusual characteristics, that is (prejudicially and culturally) thought of as outside, external to that dimension. Assuming this different perspective on the "human being/technical supports or prosthesis" divide, or "person/thing", requires, however, some cultural effort. This, in turn, will end up reverberating across the legal categories designed to rule medical services and the related terms of responsibility.

Another example—though they are innumerable—concerns the so-called informed consent and its acquisition procedures. What data is to be included in the communication between doctor and patient, what tracks of sense are to be followed in therapeutic relationships, how to understand the patient's mind so as to make clear to him what kind of health treatment he will undergo, what kind of conceptual/cultural vocabulary is to be used to translate the medical technicalities for the patient, how to decipher the existential perspective and meet the expectations of patients, and so on: all these and other similar questions appear writ large (and impeded) in the telemedical relationship. The procedure to get informed consent is not only a mere bureaucratic task—even in normal medical practice,

unfortunately, it is equivalent more or less to the gathering of a signature. This consent should be, instead, the result of a shared therapeutic path and, above all, should come from an understanding of the existential implications of both the diagnosed affections and the healthcare approach. To be sure that the patient has understood all this—as is required by medical codes of conduct and the jurisprudence of courts all over the world—the doctor has to know the imaginary background, the landscape of sense in which each patient lives and thinks. But when there are cultural differences between the two sides of a therapeutic relationship, ascertaining the patient's actual understanding becomes more difficult and must be supported by anthropological assistance. In any case, what is lacking is often the availability of time, perhaps the main hindrance to intercultural medicine. When cultural distances join lack of time and the dialogical *rarefaction* determined by the modalities of telemedical visualization of the patient body/person, the possibilities of misunderstanding can increase dramatically. Informed consent, in these cases, can become a kind of farce, thereby fundamentally threatening both the "personality and/or presentiality" of medical services and the "personality and autonomy" of the patient's choice to *comply* with a healthcare path.

In some respects, it may be observed that the contact between patients and healthcare professionals via e-Health, rather than diminishing the time-frames for dialogue and interaction, could instead widen them, and this because e-Health avoids cost and downtime inherent to spatial displacement. The time-savings is indisputable and must be recognized, provided that, however, we do not underestimate that in order to be efficaciously bridged, the gap in environmental commonalities requires a reconstructive and semiotic commitment that is necessarily stronger than in traditional medical practice. This, however, implies a prior, specific training for healthcare professionals, who should engage in more drawn-out dialogical relationships.

This overall set of considerations has far-reaching legal implications. The right to health is seen to be an agent of heterointegration of national legal systems and a factor of outward facing de-territorialization of state sovereignty. Through its involvement with the body and the ecological-relational process underlying its iconic/conceptual representation, the right to health within telemedicine produces a semantic-spatial *continuum* capable of re-connoting the semantics of legal categories inherent to the various national legal systems. Everything that orbits around the body and is tied to it—therefore also the social-economic aspects that do not seem to immediately pertain to the organic conditions of the patient—will become prone to factual assumptions within the process of legal qualification of the "disease and/or illness" and its due treatment, which legal systems working via e-Health must accomplish. So, for example, if committed to the care of a patient located in Africa, the doctor working from a European state must recognize the importance of the dimensions of sense that forge the experience of corporeality in that African locale. The assessment of those circuits of sense and their inclusion in the accomplishment of medical duties must influence the interpretation of European state law ruling the doctor's activity. Such an influence will bring with it semantic connotations and indexes of values that, in turn, can engender new relationships (or conflicts) between the right to health and other principles provided by supranational or European law. The process of contamination/re-configuration should be reciprocal, so as to trigger a multilateral and multilevel "rebound effect" between the different countries and legal systems involved in the e-Health relationship. The process of reciprocal adjustments will continue until it evolves into an all-encompassing coordination—even if doomed to be only provisional—of all the existential and legal aspects involved in e-Health: that is to say, the defining factors of the disease and/or illness with the related assessments of the possibility to care for it on one side, and the corresponding legal statements along with their potentialities of interpretive-chorological transformation, on the other. Along this path, obviously, doctor and patient will not only be passive subjects, but they too will make a substantial contribution to the direction of all the implied activities by means of their own subjectivities and ideal and pragmatic potentialities.

The proliferating of the cognitive/cultural backgrounds of the therapeutic relationship and its reciprocal adaptation will generate an intrinsically political and creative phenomenon, although carried out by using normative platforms that are already in force with a positive disposition to semantic self-transformations. The chorological dimension emerging from this process will draw the trans-territorial space in which the involved subjectivities will actually live. On the other hand, the coordination

between legal systems and their statements, so often invoked by transnational legislations—such as the European one—to allow the achievement of potentialities afforded by telemedicine will also be influenced and managed according to the hermeneutical and reconstructive exigencies coextensive with those inherent to intercultural and interspatial translations. The use of international-private rules must take into account this previous cognitive/axiological interaction between the inter-space of sense shaped by the e-Health experience and the specific state legal systems. Only by relying on the semantic adjustments determined at all legal levels by such inter-spatial interactions will it be possible to establish: a) what rules of *other* legal systems are to be applied through a *renvoi*; b) among these, which rules are to be considered compliant with the public policy principle of each state legal system; and c) more generally, what is the direction the coordination-alignment of the various state legal provision is to follow.

As for e-Health, the main task is to create spaces of sense and a legal chorology that are consistent and responsive with regard to the subjectivities involved in the "telemedical relationship". Achieving such a result has a sort of logic and chronological priority as compared to any formalistic-positive legal inter-systemic alignment. This is because the "elsewhere", the "remote", moves beyond the computer screen and gives the experience consumed "here" an autonomous constitutional and humanitarian relevance. The computer-spatial transfer will drive the questioning, the hermeneutical stressing of the constitutional principles and rights platforms provided by each legal system, so as to promote a pluralistic attitude in their interpretation. This effect would engender, precisely, a trans-cultural, trans-ductive pluralism geared towards the production of sense, considering cognitive patterns before formalistic ones, encouraging normative inter-systemic interactions. "Phenomena" such as telemedicine, accompanied and conveyed by the over-territoriality and over-nationality of values like those encapsulated in the right to health, seem thus to introduce within the contemporary legal experience a transfiguration, in a cosmopolitical sense, of both local and national social-normative dynamics. These are spurred to engage and gauge with an inter-space potentially able to *presentify* the overall planetary extension. It is a direct consequence of the possibility, allowed by technology, to *transcend* the geographical distances. Every "constitutional circuit" will tend, therefore, to work as an intercultural and inter-spatial hub within a polycentric and pluralist web, precisely the other side of the coin of a potentially global dimension of legal subjectivity and its chorological projections. The most interesting aspect of such transfigurations is that, if sequenced in these terms, they can give birth to a bottom-up metamorphosis, materializing from the quotidian unfolding of human needs beyond the traditional "sense of place". All this—I think—could make the law's responses attuned with the same dimension that, through e-Health, hosts the process of corporeity: the Earth.

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