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What could be the status of the environment?

In this paper, we will have a simple thinking about environment and the problem of giving an account of the relation between human and environment or, more generally, between the psychological environments of humans and the different sorts of external (physical, geographical, social) environments. It is an epistemological research that we began a few years ago for a master of "sciences of education" about links between evaluation and the Greek prefix *ergon* that is in our French word "ergothérapie". In France, epistemology, in the French meaning, is a philosophical point of view that tries to define the different values of the different sciences and not the theory about the nature and scope of knowledge.

The beginning of this purpose was a question about environment and ecological validity. What is this validity and what is a PEO human? It seems that the environment was quite always an extrinsic factor in the different PEO models in OT, but also in other sciences. In OT, we can understand that the main factor is occupation, or the relation between occupation and the environment. In this case, we find different paradigms but always in this triptych. As Bruno Latour explained, the science never has an objective purpose because it is human and sociologically based. We understand that OTs describe human as a person with occupation contextually determined. These activities have relevant impacts onto health of this human. But the PEO, or PEOP, models are, like every model, paradigms with their own underlying frames of reference and have their own goal (Latour, 1995).

But for OT, is it possible to have another point of view about this triptych? How can we define this man and this environment? The ICF told us that a man is a body with organs and functions, that this body always does something even when we go to do siesta. And this body always does something in the presence of others human, even if they are not physically present and that this participation is always in a specific place at a specific time.

So lets have a tried to define a man in another way with an anthropological point of view. For example, Hannah Arendt told us that a human is an animal witch is in the three mains perspectives of labor, work and action. Freud discovers that we all have an unconscious. Jean-Pierre Changeux explained that we have a cognitive unconscious and Pierre Bourdieu, that we are a member of a society conditioned by "habitus". Kielhofner MOHO model explains "how occupation is motivated, patterned, and performed. By offering explanations of such diverse phenomena, MOHO offers a broad and integrative view of human occupation. Within MOHO, humans are conceptualized as being made up of three interrelated components: volition, habituation, and performance capacity." And so on…

We have to determine the specific paradigm in witch we want to think our world, our theory. For this purpose, we will use the "theory of mediation" build in the beginning of 1960 in the university of Rennes in France by Jean Gagnepain, linguist and Olivier Sabouraud, neurologist. This theory tried to define what is a human and is based onto case studies of illness people to validate and invalidate part of its arguments.

Ecological validity

But before having a quick look onto this theory, I have to define what could be the ecological validity because if our focal point is onto the environment, one of the main words is "ecological validity". In the literature, there are two main paradigms about this concept. The first paradigm explains that ecological validity is the fact that the laboratory's tests can't have good prediction validity. Since 1974, ecological validity refers to the degree to which results obtained in the psychological laboratories can be generalized to outside laboratory, and today, to the "real life". Shallice and Burges published a famous article in 1991 in which they explain this problem and the necessity of creating different evaluation which have place onto the "real life" and have a multitask logical. This is why they create the EMT for example. Every body now knows this point of epistemology. What does it mean? Two main aspects: the predictive validity and the ecological validity. The predictive validity is not specific for ecological evaluations. It is a classical criterion of method like fidelity. It refers to the degree to witch the results of

measurement can predict the behavior in the future. But ecological validity refers to the capacity to infer the performance in everyday life form the results of tests. For OT, if we read the Kielhofner book "Research in Occupational Therapy: Methods of Inquiry for Enhancing Practice", there is only 2 pages on this point, even if many OT claims that it is an important perspective and that the OT are ecological therapist (Guihard, 2007).

In the early 1930, Egon Brunswick was the first one to create the concept of "ecological validity". He was a psychologist form the behavior school, friend of Kurt Lewin. He tried to define how human use the information coming from outside of the body: was this information interpreted as coming form outside or form inside. And, in this information, what piece of it does it take care?, which cue (perceptual variables, like the size of a door) is defined by the humans? And so on. He clearly tried to find the criteria of a good observation, and had a real methodological thought and not only a methodic thinking. He wanted to include in the psychological field those parts of the physical and sociological world. In this purpose, he used the term of probabilistic to try to analyze how the subjective probabilities match up with objective ones (Hammond, 1998). Brunswik argued that an organism's behavior is organized with reference to achieving a particular goal or objective in an inherently probabilistic world. In line with this standpoint, ecological validity was defined by the terms of representative experimental design. Araújo (Araújo, 2006) goes on telling that Brunswik defined these observations as the statistical correlation between the cues available to an organism and the distal criterion variables of interest (a goal, or a desired state). To make such judgments an organism needs to pick up perceptual information of a diagnostic nature. The ecological validities of cues provide a normative description of how diagnostic available indicators are with respect to the criterion (i.e., how 5 effectively the distal criterion variables can be inferred from the cues perceived).

Because OT need to define such criteria even if they use valid tests as London Tower or EMT, in the current life of the patient, they need to get these criteria, of course with the client, but also with himself as OT. He had to get cues and have an auto-thought about this (Guihard, 2007). An example could be the capacity of the client to be punctual. But what is punctuality. If the client needs to be at 2 P.M., at what time will he be late? At 2.03, 2.10? And if he is at 1.55, is he early, late or at time? This example refers to metrological because we need objective information, measures, to say "you have an average of 7 minutes of lateness" But after, we need to select a specific cue in the observation we made. Do we only had a look at the watch or did wee look at the face of the client: is he smiling, did he run or was it deliberate. But we can have

another point of view. We can use Michel Foucault (Foucault, 2001) when he explained that this assessment could be first a "Serial vigilance". In this perspective, our attention is focused onto sequences of activities or elements. What our client did just before coming with us? But this assessment can be "circumstantial vigilance". Our attention is focused onto the external world, to its construction, elements, and sensations. For Harrer, "the two types of vigilance thus constitute two distinct orders: the first one, "serial vigilance", refers to a homologous series, i.e., a series constituted by elements of the same type, namely the activities of one individual. The second one, "circumstantial vigilance", refers to a heterologous series, i.e., to the interferences between the subject and the medium in which he or she is placed, in both a spatial and temporal sense."

The theory of Mediation (TDM)

A model for practice has the capacity to deconstruct the human phenomena to analyze and understand the human reason. The TDM have obviously these capacities. It is not an OT model, nor a PEO model. It is an anthropological one. His main logic is based onto the deconstruction of the human's reason in four levels, four plans, four rationalities. There is no hierarchy between them. If we decide to focus onto human reason, it is because we have no direct access to the world, to our real life. The access to the world is always mediate by our reason because we interpret the natural perception.

This model deconstructs the reason onto four rationalities: logos, ergology, sociology, axiology. For example, the language is not only speaking. It is also artificialized by our tools for writing (pen or computer). But it is also socialized as French, Deutsch, English… And, last but not least, language is axiolized and normatived as truth, lie or desire. This is me that tell you something with writing words in a specific language and a specific purpose witch refers to paradigms and therefore to belief, faith. For each level of rationality, the TDM associates mediation. For the logos, we find the "sign", for the ergology, the "tool", for the society, the "ethnic" and for the person, the "ethic".

As Plato in Protagoras and Aristotle in Part of animals explained, human wanted to negate their nature with the fact that we have logos, praxis and political art. In the TDM, it is the same even if there is a fourth level. Jean Gagnepain add this last level because of the discovery of Freud first, and the cognitivist, later. This negation is an acculturation of our rationality, our reason. Because of this, we create culture, law, taboo and many things witch are not in the need but into desire. As Georges Bataille wrote, we are human because of the "utility of the useless".

Foie gras is not useful to our animal life, for the human one, yes. It is the same for poetry, music and fashion…
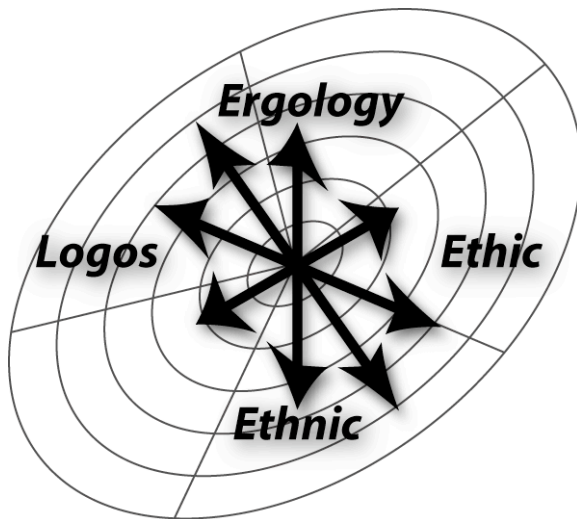

Fig.1 : the four plans of rationality

When I say something to someone, I use logos to speak. This implies to use signs (sound and sense). Because I am with someone, we are also onto sociological rationality because there are interaction, I don't use the same language if I speak to my boss, my wife, my client. And because of this, speaking is also axiology because I transmit values, respect, and norms…For example, when I am with a person with aphasia. Even if his speaking language is illness (level 1), he still can have relation (level 3) and have values (level 4). For writing or using pictograms, it could be difficult (level 2). If the relations are difficult, what is wrong? Only language or is there another level at work. And what about the three levels of communication (verbal, infra-verbal and non verbal)? A few years ago, we meet a schizophrenic person who seems to have trouble about speaking and activity with others. In the TDM perspective, witch levels are problematic? We discover that he speaks but with an unknown language and make strange activity because he has his own language and tool's grammar. Every level are fine except the level 3 (sociology). This last level is also "where" we transform the language as linguistical, logical capacity in a speech to the other.

To conclude, we all know that children learn very fast to communicate (plan 3). But it is very very long to learn writing because it is an ergological skill (level 2) and a logical one (level 3). Even if the child speaks well early, learning the grammar is longer because at school, you don't learn to speak to other, but just a specific language. We are in the knowledge and not in the relation. In this relation, we would learn the impropriety of words, polysemy, play on words, slip of the tongue…

But what is an environment?

Lets suppose that the environment is every thing outside of the body. If we told such thing, we must define the outside and we have two main points of view: first, the natural environment

that seems extrinsic and then, the human one. The second is an artificial environment because human speaks it, build it, transform it and live into it in specific society. This is the difference between a natural and a human environment. In the two cases, we act onto the environment and the environment acts onto us. This is this relationship that we need to analyze to have an ecological assessment or therapy.

For the natural environment, because it is a natural one, we have no action onto it and leave it as it is. But this environment can act on us as the rain, the wind, but also the animals or when sun goes down. For the second environment – the human one – it is not a natural one because we, as human, change it with our tools and these actions imply an instrumental capacity. But using tools is also a logical, a cognitive skill. But these tools are also sociologically built by a specific society. And, at the end, this is me, J-Ph Guihard, that use a specific tool for a specific goal. Therefore, the human environment implies four plans of rationalities: logical, ergological, sociological and axiological. If we have an OT point of view, in an ecological paradigm, we must look at these four levels of rationality and always have focus onto each plan and rearticulate them together (Ardoino, 1999) because our client is a human.

For i.e., the problem of apraxia is not exclusively a cognitive problem, it is a problem of these four plans because using a tool for an activity implies logical, ergological, social and personal capacity at the same time. If you focus exclusively onto apraxia, you loose all the others. A clinical assessment like in the laboratory is monofocus and we need such assessments to analyze the dysfunction. But to be an ecological OT, you need to rearticulate with many others assessments to have multifocuses point of view. Writing is a technical skill, but writing is also a logical one because we put different letters together to create words. These words are signs and forms to do together meaning. It is also a sociological skill to because we write letters for someone and it is an axiological aptitude because we say something of us.

Fig.2 : the TdM environment

If thought …	Knowledge, Representation.	Logos, language.
If built…	Artifacts, Industry.	Ergology, art.
If social…	Sociology, anthropology.	Communication, ethnic.
If personal…	Axiology, law.	Person, ethic.

The environment is build with words that define the world, speak it and imagine it. These words are not human because we don't speak human but specific langue and this langue is determined

by our logical skill, therefore, our linguistic capacities. This text is a good example because we don't tell the same thing with the word "environment".

But, like environment is build by our brain, it is also build, changed, by our tools and this environment refers to our capacity to provide the *ad hoc* tools to change the world. We born nude told us Prometheus and all our relationships to the world are equipped (i.e. Our clothes, our shoes, our houses, cook tools…). All our life is equipment. Tools imply technical skill, dexterity, but also efficiency in the way of relationship to the instructions leaflet. And theses relationship have two sides: tools and aim.

But environment is also social because we always live together, in a specific society in three main levels (family, community, society). If we are quite normal, we never speak alone, but for someone else. Because we are political animals, we live in a specific society that we co-create. It is the political and historical perspective. We live with norms, law and we know how playing with, against, using the ad hoc ones.

But the environment is also a personal environment, a singular way to build our personality, our person. This fourth dimension is an axiological plan. It refers to value, law, autonomy, and desire. We produce moral, right, rule that help us to be in front of the others. Human is will, freedom, culpability witch are engine and brake at the same time.

In this way, the environment totally extrinsic doesn't exist by itself. Like Theaetetus, even if we never swim twice in the same river, even if we can't change the powerful of the wind or the rain when we are in the street, we can enter into a bar to protect our hairs. In the same way, if I'm paraplegic in front of three steps and can't go in the cinema, at this moment, I can't change the stairs. But I can decide what I want: going back home, asking help, crying…

Human have no direct access to the nature. We can have an access to this nature with our perception, our ears, eyes, but after, we mediate this perception with our logos, our capacity of knowledge. And because we are not only meditative, we always have occupation told the English OT, activity the francophone one. This activity is mediated by our creation, our ergologic capacity. But as we told and create, we also are always with others and we mediate the relation to world by our sociological, legislative, ethnic capacity. And all these interact with the fact that I'm a personality, J-Ph Guihard, a singular person, able to manage my frustration, elaborating law and to suffer them.

But where is the body? In our way, if we are paraplegic, we need assessment for my organical functions, but we need to evaluate the logical capacity (some can speaks about cognitive) to

know his level of knowledge. But we also need to have a look at what I can, want to do. We also have a look to the relationship and, of course, last but not least, my personal capacity. Which image of myself has I? Am I depressive, am I still a father, a lover, a husband or only a paralyzed?

Conclusion

As we saw in this paper, the status of the environment is paradigmatically referring to a specific point of view. In the PEO models, the focus is done onto occupation and environment but the status of this environment is not clearly defined because the human is not defining too. The purpose of the theory of the mediation is to define the human being for the client, but for the OT too. The ecological validity of this model is in its capacity of rearticulation of all these levels. Even if it have an ergologic level witch refers to the "ergotherapie", we must think the client in all his levels of rationality. Because of this, there is no opposition between the TDM and the PEO models. In fact, we must always have the TDM in mind to use the PEO modelsto be in a full holistic paradigm.

Plouguernével, on 08 april 2008

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