

## **The System of the Dimensions of the Organism (SDO): a common vocabulary for body psychotherapy<sup>1</sup>**

Michael Coster Heller and Gill Westland<sup>2</sup>

Contact: Michael C. Heller, Dr. In Psychology, psychologist and psychotherapist AVP/FSP/EABP, Rue du Maupas 10, CH-1004 Lausanne.  
www.aqualide.ch; www.aqualide.com  
Email: mmaupash@aqualide.com

Michael Coster Heller, Doctor in psychology of Duisburg University (Dr. phil. und sport). Member of the European Association of Body Psychotherapy (EABP) and the Swiss Federation of Psychologists (FSP). He has published two books: 'The Flesh of the Soul' (Peter Lang), and a French manual on Body Psychotherapies (De Boeck). Michael was trained in Piagetian cognitive and developmental experimental psychology, nonverbal communication and Biodynamic Psychology in Geneva. His carrier, publication and presentations combine his research in Nonverbal communication in the Laboratory of Affects and Communication (L.A.C.) of the Geneva Psychiatric University Institutions (I.U.P.G.) with his clinical research in body psychotherapy.

Gill Westland is Director of Cambridge Body Psychotherapy Centre (CBPC) and a UKCP registered body psychotherapist, trainer, supervisor, consultant and writer. She has worked as a body psychotherapist for many years and has been training body psychotherapists for the past 20 years. She worked originally as an Occupational Therapist in the National Health Service in Mental Health at the Maudsley Hospital, London, and then at Fulbourn Hospital, Cambridge, as a clinician and then as a manager, clinical supervisor and teacher. She is a full member of the European Association for Body Psychotherapy (EABP) and an External Examiner for the Karuna International Institute in the U.K. She is co-editor of the journal *Body, Movement and Dance in Psychotherapy* (Taylor and Francis). The body psychotherapy training offered at CBPC is rooted in a psychospiritual perspective.

### **Abstract**

This article outlines the System of the Dimensions of the Organism (SDO). The system is an intra-psychic model developed by the main author from discussions with colleagues from a wide range of body psychotherapy approaches, relaxation

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<sup>2</sup> The SDO model has been developed by Michael Heller. Gill Westland has helped him to formulate his thoughts in English and to clarify his proposal.

methods, body-mind approaches and methods from the Far-East (India, China and Japan). It proposes a common vocabulary to map basic forms of intervention, which are differentiated in most schools of body psychotherapy. I distinguish explicitly the following terms: organism, body, behaviour, psyche, metabolism and global physiological regulators. The aim of the model is to propose a basic terminology and classification, which could be used to exchange knowledge between different schools of thought in the “mind-body” territory.

Key words: intrapsychic model; classification of terms; common vocabulary; mind-body therapies

## 1. Introduction

What's in a name? that which we call a rose  
By any other name would smell as sweet.  
(Shakespeare, 1595, p. 570)

In 2005 my friend and colleague Claire Colliard asked me to write a French textbook on body psychotherapies for De Boeck, which publishes a series on psychotherapy. As I described various approaches dealing with the mind and the body, I realized that I was often repeating myself. At first, I was worried by these repetitions. But as I looked more closely, I noticed that although many schools presented their methods as highly original they were in fact using the same ideas. It was only the words that they used, and their cultural style that was different. The originality of each school could be characterized by the musical notion of variations on a common theme. Each school has a particular way of accomplishing certain tasks, which can be particularly relevant to treat a set of symptoms, describe organismic dynamics or artistic aims. But, most of the basic techniques are based on often implicit common knowledge. This led to the development of the *System of the Dimensions of the Organism* (SDO) or System of Organismic Dimensions described in this article.

The aim of this model is to define these notions that are used by many schools of body psychotherapy, and to propose a vocabulary that can be used by all. In this way schools can communicate with each other, and highlight those aspects of their work which are truly original, and therefore of interest for colleagues from other schools.

The System of Dimensions of the Organism (SDO) can be used at two levels: The general and overarching framework of the SDO proposes distinctions that can be used by all schools, as it focuses on explicit definitions of what is meant by terms such as body, psychological dynamics or psyche, behaviour, physiology and metabolism. These terms designate *dimensions* of the organism addressed by modes of intervention. [This categorisation does not correspond to how the multiple and fuzzy routines of the organism differentiate themselves in the real organism, but it categorizes what distinguishes therapeutic \*modes of intervention\* from each other. For example, the distinctions between psyche and soma, or](#)

behaviour and body that I shall present are simplistic compared to what scientists will be discovering during the next decade on the dynamics of a human organism, but they do correspond to what is distinguished during discussions between therapists trained in different modalities.

Once this general frame is defined, it becomes easier to differentiate the mechanisms that allow the coordination of the dimensions. Two highly popular positions are distinguished. These are theories that assume that there exists direct links between the dimensions, and theories that assume that the dimensions are co-ordinated by a variety of links. Some authors, for example, believe in the existence of relatively direct links between body and emotions (Ekman, 1980; Kellerman, 1985; Lowen, 1975), whilst others believe that links between affects and body are complex, multiple and indirect. In this article I defend the second position because I have the impression that it is the one that is closest to present day scientific knowledge<sup>3</sup>. However, I assume that most colleagues have a blend of intermediary positions which can be described by using the frame offered by the SDO model.

The SDO model is mainly a *topographic* or pictorial model of the organism, like Freud's topographic models of the mind. In his first topographic model he distinguished "areas" of the mind (unconscious, preconscious and conscious). Freud never believed that his topographic models describe the structure of the mind, but he thought that his models could be used as a rough sketch which could help psychotherapists to organize the huge quantity of material they have to deal with during each psychotherapy session in a useful and manageable way. Topographic models only identify different types of mechanisms. These mechanisms can be explained in different ways, and can be managed by a variety of theoretical contexts. Even Freud changed his mind on the way terms such as unconscious and conscious could be understood and differentiated. Although the distinctions proposed in the SDO model are different from those proposed by Freud, they can be used in a similar way. They allow the practitioner to identify certain phenomena and forms of intervention in a way that can be communicated to patients and colleagues, but they do not impose a strict frame on what is understood by each term. The model can therefore be used as a reference by a wide variety of approaches.

In this article, I will focus on the description of the general model. A more detailed discussion of the relevance of the distinctions I make for psychotherapy and body-mind approaches can be found in Heller (2008).

## 2. The four bodies

The term "body" is a good example of why we need some form of agreement on the vocabulary we use. In the European literature, the following four definitions are commonly used to define the "body" of an individual entity:

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<sup>3</sup> See Heller (2008) for a detailed discussion of this issue.

1. Galileo (1630) and Newton (1676) use the term “body” to designate any entity which can be perceived and weighted, and that has a clear contour. Thus a star seen from far way, a stone or a plant is a “body”; while the sky, wind and energy are not “bodies”. Mechanics is the science that attempts to describe and predict the behaviour of inanimate “bodies”.

2. Since the 18th century, scientists have also defined animated entities as bodies. Any individual plant or animal is a body. This meaning of the term “body” is equivalent to the term “organism” used by most biologists since Darwin. This tends to be the dominant usage of the term body. For example some authors (e.g., Varela, 1991) talk of an “embodied mind” to stress the thesis that the mind is an integrated regulator of the organism.

3. Antonio Damasio (1999) wrote “Body and emotion in the making of consciousness”. In this title, the term body designates all the physiological dynamics of an organism: the nervous system, hormones, muscles and breathing in an undifferentiated way. When he discusses the relations between consciousness and the body, he uses a modern version of the body and soul distinction. He thus needs to differentiate himself from Descartes and Spinoza (Damasio, 1994; 2003) by specifying that in his model mind and body constantly interact with each other. It is then the brain that allows representations, affects, physiology and behaviour to influence each other. This body can also be designated by the terms such as “soma” and “physiology”. I have many friends and colleagues who use the term body in this way. When used with this semantic frame mind/body issues are equivalent to differentiating psychological and neurological dynamics.

4. A more specific usage of the word ‘body’ can be derived from what the anthropologist Marcel Mauss (1934) calls *body techniques*. These are modes of intervention that address a particular dimension of the organism, closely associated to muscles and bones: posture, movement and the coordination of body segments. This body is also referred to as the “physical body”. It is this more specific meaning of the term body that I will use for the System of Dimensions of the Organism.

This narrower fourth definition of the body allows me to differentiate a global physiological approach of the organism, from the more specific skills that are used by therapists who pay attention to the quality of the skin, muscle tone, the mobility of joints and the way body segments coordinate when a person moves. It is the capacity to deal with such phenomena that differentiate body psychotherapies from other psychotherapeutic approaches that use the notion of an embodied mind without intervening on the physical body. Once they are distinguished, it becomes easier to discuss various ways of combining interventions on the body, on physiological dynamics and on the mind. I have emphasised this because some forms of body psychotherapy present themselves as “somatic therapies”, and are part of body psychotherapy associations because they also have expertise in the analysis of breathing, movement and muscle tone.

### 2.1. Body and behaviour

Even if one uses the specific definition of the body above, it still remains difficult to differentiate it from both physiology and behaviour. Body movements and

behaviour use the same muscles, and the same segments of the skeleton. However, behaviourism and body techniques approach this subsystem from different perspectives, based on different principles (Heller, 1997). Body techniques try to create a comfortable way of coordinating muscles and bones with each other. Behaviour therapies try to develop the skills required to use tools and to communicate with others. Body-mind techniques are focused on auto-regulation, while behaviour approaches focus on how an organism interacts with its environment.

Therapeutic interventions used with anorexic patients help to differentiate body techniques and behaviour. A behaviour therapist will teach an anorexic patient to modify their approach to food. This is different from the work proposed by Thea Rytz (2009) in the Bern (Switzerland) hospital, using what she calls Mind-body awareness, inspired by approaches such as Elsa Gindler's (Geuter, Heller & Weaver, 2010). She aims to modify how anorexic patients experience their organism by using body and awareness exercises:

To reconnect with one's own body is to learn to perceive it from within, listening to the proprioceptive sense. ... Reconnecting with one's body strengthens the connection with oneself and one's environment, boosting confidence in one's personal potential for development. (Rytz 2009, p. 28).

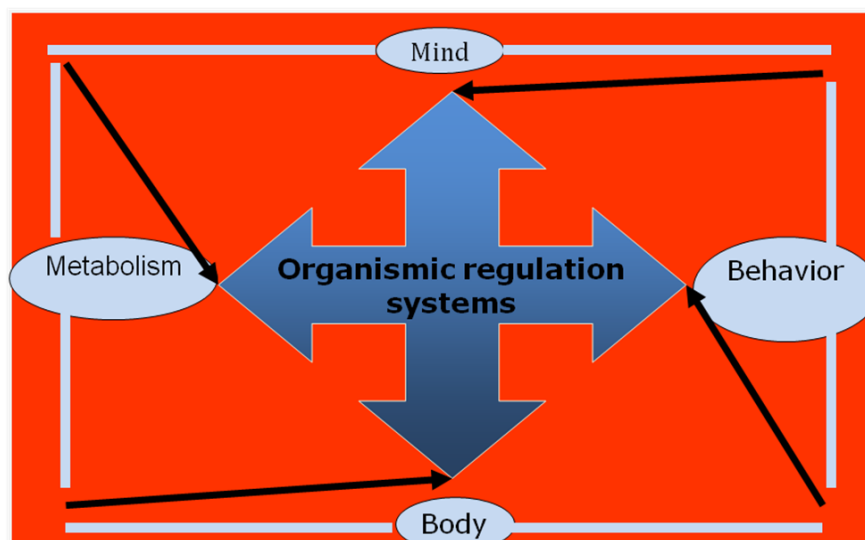
In this quotation Rytz oscillates between the body as defined by Damasio (the organism) and the body as defined by Mauss (postural dynamics). The advantage of using the SDO in such cases is that one can easily follow these semantic shifts.

## 2.2. Behaviour and mind

When the term behaviour is used, it often mixes references on the body and the mind in an unclear way. Behaviourism is based on the notion that studying behaviour is the only approach that allows one to study the mind in a scientific way (Watson, 1919). In the SDO model, I distinguish typical psychological phenomena such as conscious sensations and representation, from common behaviours such as ways of handling a spoon with one's hand.

## 3. The System of the Organismic Dimensions

Figure 1 The SDO model



In Figure 1, the frame of the drawing is the organism, or global individual system. Within this system I distinguish four dimensions: metabolism, mind, behaviour and body. These dimensions are coordinated by the organismic regulation systems. Smaller black arrows show that each dimension also has an impact on the organismic regulation systems.

It is possible to distinguish interpersonal and an intrapersonal psychology. *Intrapersonal psychology* focuses on how the mind participates in the regulation of the organism in which it exists. A well-known example is psychophysiology, which describes how perceived representations and feelings correlate with physiological and body dynamics. *Interpersonal psychology* assumes that behaviour is activated by inner and outer stimuli, and focuses on the interaction between the behaviour of several persons, and its impact on the development of affects and representations within each individual. It assumes that what happens inside an organism constructs itself in functions of regulatory systems that are activated by an interaction with others (Beebe, Knoblauch, Rustin, Sorter, 2005; Rochat, 1995; Tomasello, 1999 and 2009; Vygotsky, 1934). The SDO model focuses on intra-personal regulation systems. It distinguishes:

A. **The organism.** An individual is considered as a global individual system called the organism by biologists. This global system also has global regulation systems, called organismic regulation mechanisms. These global regulation systems allow more local mechanisms to communicate with each other. They also impose on local systems constraints that allow the organism to function as an entity.

B. **Dimensions of the organism.** Dimensions allow a grouping of local organismic mechanisms, which fulfil basic adaptive needs for the organism. The body dimension allows the organism to adapt to gravity, behaviour allows the organism to interact with objects and other organisms, metabolism allows the organism to regulate its vitality and the mind allows an organism to participate in institutional and social dynamics. Each dimension is the target of a set of intervention strategies which focus on the particular dynamics that characterizes a dimension. As each dimension follow a specific set of rules, they have heterogeneous aims.

Body psychotherapists explore how these dimensions *resonate* with each other through organismic regulatory systems, and with the dimensions of other organisms within the frame of an interaction (Boadella, 1978). The psychotherapist notices that when he puts his hand on a patient, a whole series of events occur in the organisms of the therapist and the patient. The therapist may notice changes in emotions, thoughts, sensations, breathing patterns and skin colouration, and will want to understand how these processes are connected.

The assumption that each dimension is a dynamic sub-system which follows its own particular rules can help the therapist to clarify a wide range of issues. For example, people are seldom aware of how they interact, and are often astonished when they watch a video recording of their behaviour. During a video-analysis session, it becomes obvious that behaviour is often activated by mechanisms that consciousness is not aware of, while consciously we think that we monitor all of our behaviour. My way of dealing with this issue is to assume that organismic regulation mechanisms may be influenced by conscious thoughts, but that often habitual behaviour is activated without requiring active participation of conscious thoughts. Thoughts and behaviour tend to function in parallel, each following their particular dynamics. Organismic regulation systems may allow different forms of interaction between the two dimensions, following rules that have not yet been studied in a satisfying way. Most of the organismic dynamics that connect a thought and a behaviour are *nonconscious* (Heller, 2006): they cannot be perceived in an explicit way. Introspection cannot create a representation of how the brain functions. Nonconscious dynamics are therefore different from unconscious ones. A conscious perception may become unconscious because defence systems do not want it to become conscious, but they have a format that consciousness can perceive. Nonconscious dynamics are often too complex for a consciousness that can only handle a few variables at a given moment. It is therefore useful to focus for a while on a patient's behavioural strategies, as if it was an independent sub-system. Once the patient has become able to perceive how he behaves, and how he can modify his behaviour, a first, relatively simple task has been accomplished. It then becomes easier to explore how the behavioural repertoire that has been analysed connects with what the patient thinks and feels. This task requires different tools. For example, impressions cannot appear on a video, but one can use a video recording to ask a patient how he feels when he observes a behaviour of which he has become explicitly. Again, these feelings are approached as a differentiated sub-system that does not necessarily have the same aims as behaviour. My emotions may want me to do one thing, and my environment may require from me a set of behaviours that are not compatible with what I feel. For example, I may want to sleep while my child needs my presence. Learning how to deal with such heterogeneous requirements is an important theme for psychotherapy.

### **3.1. The dimensions of an organism**

The dimensions of the organism are now defined in a more explicit way.

#### **3.1.1. Body and gravity**

The main basic adaptive function of the organism that can be related to the narrower definition of the body I use, groups all the mechanisms that allow the organism to adapt to gravity. Although all the cells of the organism are influenced by gravity, postural dynamics are the organism's main tool to manage the organism's response to gravity (Feldenkrais, 1949; Heller, 1997; Rolf, 1977,). Standing

on one's feet changes the influence of gravity on how blood is distributed in the organism and on breathing. Adapting ways of sitting, using methods such as the Alexander Technique (Alcantara, 1997), will help a pianist to move his hands more easily on his instrument. Posture takes care of biomechanical issues, and allows the hands to focus on behavioural issues such as how the music should be played.

When a body psychotherapist works with the body dimension, he focuses his attention on muscle tone, the alignment of the body in space, the postural repertoire etc. From the perspective of body techniques, the principle of economy that is often used is the following: good movements are those that use as little as possible of the organism's resources to achieve a performance with ease. [To do this, the body psychotherapist will often use modes of intervention developed by what is called body therapists in the USA, physiotherapists in Great Britain and France. They also often use methods developed in body-mind approaches such as those of Feldenkrais and Selver \(Kogan, 1980\)](#)

### **3.1.2. Interacting through behaviour**

Behavioural dynamics allow an organism to interact with organisms and objects around him as efficiently as possible. The connection between body and behaviour is immediately apparent, but follows different rules. The habitual behaviour of an organism may be satisfying for its social environment, but may impose on the body postural dynamics that may be unhealthy for the spine, breathing and blood circulation (Heller, 1997 and 2008). Such behaviour mobilizes organismic resources that are often different from, and sometimes contradictory to, those that are activated during a course of Hatha-Yoga or a Feldenkrais session. From the perspective of behaviourism, the principle of economy is that good movements are those that use as little as possible of the organism's resources to manage objects and communication in the most efficient way. This example shows that a behavioural repertoire has an impact on how an organism auto regulates. It also has an impact on other's auto-regulation. Thus emotional expressions are not only a manifestation of what a person feels, but also a way of influencing how others feel.

Kendon (2004) cites research that suggests that when faced with a problem, verbalized solutions are not necessarily identical with those proposed through movements. Sometimes one needs to act before one knows what to do, sometimes speaking before acting is more efficient. For example, a person may pick a fruit before she is aware that she would like to eat it. Thus different forms of behaviour (e.g. speech and gestures) may be activated by different organismic procedures.

The management of the here and now is a central feature of behavioural dynamics. One has to improvise on the spot about how to react to another person's behaviour, or recalibrate the way one speaks when one's expression does not have the expected impact on others.

While physiotherapists are proficient when they work with the body, they are often poor analysts of behaviour. Studying how people communicate while they



interact does not yet constitute a well organized field. Although studies of interaction allow the most refined way of analysing how behaviour is integrated in interaction, the researchers involved in these studies usually come from a variety of disciplines such as Anthropology, Engineering, Ethnology, Linguistics, Psychology, Sociology. Using the SDO model helps these researchers to focus on the particularities of behavioural mechanisms, and differentiate them from body and psychological dynamics more clearly. Once this is done, they can then formulate clearer questions and hypothesis about the mechanisms that associate gestures and mind. All disciplines which analyse behaviour independently from psychological and body dynamics should thus form, in the future, a unified field which could lead to a new of kind of behaviourism. It is only once this field has been formed that one could try to understand how psychological and behavioural dynamics are coordinated.

Operationally, this distinction has existed since Watson (1919) proposed a behaviourist approach to the mind. However, at a theoretical level, the distinction is seldom clear. Many believe that mind and behaviour form a unified dimension, ignoring that a hand and a brain are connected by a complicated web of mechanisms that involve millions of cells used by highly differentiated mechanisms (nervous, hormonal, muscular, cardiovascular) (De Lange, Roelofs & Toni, 2008; Vuilleumier, 2005).

### **3.1.3. Metabolism and energy**

‘We live impressions of vitality like we breathe air’. (Stern 2010, page 3)

It is well known that a human organism contains mostly water, but few psychotherapists ponder the relevance of this inner sea for their field. Yet psychiatric drugs can only become active once they have been able to modify specific dynamics that manage cellular communication within the organism (Bennett, 2005). Various processes organize this cellular communication, and the cellular participate in global organismic regulation systems, which influence affects (Pert, 1997; Römera et al., 2009). It is these dynamics that are currently designated as metabolism.

Homeostasis (Cannon, 1932) is an example of how the organism interacts with the environment in terms of basic metabolic needs. For example, the internal fluids of the organism require uniformity of temperature, acidity, equilibrium of chemicals (oxygen, negative and positively charged ions) and metabolic wastes (or toxins). To satisfy these requirements, organisms have developed a wide range of behaviours such as knowing how to seek for warmth and food. Humans have combined these homeostatic processes with major social skills like building houses, and various forms of agriculture (Laborit, 1971). Human technological creativity was thus strongly supported and motivated by homeostatic requirements.

Metabolism is a key element when one works with breathing constrictions or eating disorders such as anorexia and bulimia. In anorexia, the metabolism accommodates to a new way of eating (Bennett, 2005). Anorexic behaviour links

itself not only with mental and affective dynamics, but also with new stabilized pathological metabolic requirements. Psychotherapy can help a patient to improve his behaviour and to reflect upon how he experiences his nutrition, but this work only becomes efficient in the long term once it has been supported by relevant metabolic changes. Metabolic dynamics need to develop ways of managing more food.

In the same way, some people are “oxygen anorexics”. As soon as one asks them to breathe deeply, their head spins, they need to inhibit their breathing, and quickly use the energy they have accumulated through immediate action or hyperventilate. Their metabolism can only manage relatively small quantities of oxygen. One way of explaining this “resistance”, which is currently observed in body psychotherapy, is that having more oxygen allows more vitality, and vitality makes needs and emotions more intense. In an environment that cannot integrate strong affects, the organism learns to reduce metabolic needs in oxygen in order to reduce the intensity of needs that can only lead to frustration. In hyperactive people, there can be a lot of motor activity (movement, speech). This activity occurs before real needs are experienced. This type of behaviour is often associated with low tolerance of frustration and impulsivity. Metabolism is thus the dimension through which an organism regulates its vitality. This domain is mostly studied by biochemists.

It is at the level of cellular communication that biochemists locate the dynamics of the energy used by an organism. The relation between metabolically produced energy and the other dimensions is of course reciprocal. For example, the quantity of metabolic energy depends on how much you breathe and eat. Once energy has been produced metabolically, it can be spent in a variety of ways. This is the domain that the biochemists often call bioenergetics (Lehninger, 1965; Popp, 2001).

In the realm of body psychotherapies, Alexander Lowen (1975) used the term “bioenergy” to designate that which was termed by Wilhelm Reich (1949) Orgone in days when Reichians were persecuted and the word “Orgone”, banned by the USA government from scientific literature. It is therefore mainly as a legal strategy that Lowen decided to use this term. For similar reasons, Charles Kelley (2004), who also trained with Reich, referred to Orgone as “Radix”. It can be assumed that theories of such as Reich’s Orgonomy are simplistic metaphors for the powers animated by chemical dynamics in the universe.

#### **3.1.4. Psychological resources and the institutional integration of an organism**

Psychological regulation systems allow an organism to participate in institutional social dynamics. For humans this implies the capacity to handle media (tools, writing). This capacity allows organisms to participate in political, economic, cultural, artistic and spiritual institutions.

Psychology describes the means that are situated within the organism, which permit the construction of such social regulation systems. Thus, psychologists

study intelligence, while schools teach children to use their behaviour and mind in ways that will help organisms to participate in social dynamics. Social sciences study how institutions use these psychological capacities. Thus social technology has helped organisms to access food. As psychological resources cannot be fully described by the rules of psychophysiology, it is generally accepted that it has a strong interpersonal component (Beebe et al, 2005; Rochat, 2009; Tomasello, 1999; Tronick 2007; Vygotsky, 1934). The exact nature of psychological dynamics has not yet been grasped, but its development must necessarily pass through behaviours that interact with media and rituals (socially constructed modes of communication and manners).

An important difference between behaviour and the mind, is that thoughts are relatively independent from the here and now. I can, of course, focus on what thought occurs to me in the present, but I can also read Homer's epic, and contact thoughts that were inscribed on a manuscript thousands of years ago at a great distance from where I live. This capacity is crucial for institutional dynamics.

Learning how to use the time dimension to repair damage that has occurred during a here and now moment while interacting can be incredibly useful, although what Tronick (2007) calls "repair systems" can also be used for manipulative purposes.

### **3.1.5. Summary**

These distinctions can be summarised and illustrated with consideration of hand movement.

1. A hand movement mobilizes a variety of metabolic resources, generally referred to as energy.
2. The same hand movement is in interaction with the body dynamics that interact with gravity.
3. As this hand movement necessarily occurs in the here and now, it is a behaviour which is a part of how the organism interacts with object and other organisms.
4. When this hand is used to manage tools and media, it is also integrated in forms of communication that are relatively independent from here and now dynamics. For example, I can easily correct what I am writing at a given moment.

## **3.2. Organismic regulators and affects**

Ultimately, the whole organism is a construction of nuclear particles and chemical reactions. Thus all the dimensions of the organisms are made of the same cells, but each dimension coordinates them in particular ways.

Therefore, the same nervous cells may simultaneously participate in dynamics that produce thoughts, behaviour and movement. This web of interconnected mechanisms is the basis for the global organismic regulation system, through which dimensions can be connected.

Some approaches postulate relatively direct routes between the dimensions (Ekman, 1972). However, I assume that direct routes, if they exist, are rare (Heller, 2008). Even innate habitual modes of functioning are a complex system of mechanisms which have a certain plasticity which can be calibrated by the ways in which they are used during a life time (Thelen and Smith, 1994). I assume that the relations between dimensions are complex and can be co-ordinated in different ways. The implication of this position is that the global physiological systems of the organism (neurological, cardio-vascular, hormonal, respiratory) participate in the co-ordination of the dimensions of the organism in different ways. I locate affects in this flexible web of connexions. I use the term affects to designate organismic propensities such as instincts, needs, moods and emotions.

Organismic regulators regulate dimensions and how they connect, and are influenced by the particular dynamics of each dimension. As all these systems follow different laws, the connections between the organismic dimension and particular dimensions is generally asymmetric. For example the impact of thoughts on physiology does not necessarily follow the same laws as the impact of physiology on thoughts, or the impact of behaviour on physiology. Otherwise, one could not explain the particularities of logical thinking, or the particular form of training required to calibrate a form of behaviour.

#### **4. Conclusion**

In this article I have shown how the System of Dimensions of the Organism can help practitioners to become more specific about what they observe and how they describe their interventions. This implies adopting a common vocabulary which distinguishes body work, interventions on physiology and metabolism, analysing thoughts, behaviour and emotions. The novelty in what I propose is a way of distinguishing words that are often used interchangeably, like thoughts and affects, behaviour and thoughts, behaviour and body, body and organism and so on.

The System of Dimensions of the Organism is intended to stimulate and start a discussion which will encourage other colleagues to improve on this initial proposition.

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