On Mineness
Action, Information and Knowledge In-the-World

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Abstract

Relying on Heidegger's Being and Time *as ontological base of the investigation, thus claiming that we, as we ourselves are, already are in action, this paper presents a phenomenological account of the meaningfulness of action, in which a person always already is. It is within this primary and unfolding action, its horizons and possibilities, taking into account* my *own concerns and goals, that other people, events, and objects, might or might not affect* me. *In this paper we point out the relevance of the course of action in which a person already is involved – his or her concerns, goals, projects and dispositions – for the shaping of meaning of whatever comes across himself or herself. The meaning of dialogue, of other people discourses', of opportunities and threats might not rely so much on the kind of information a person accesses, but instead it might indeed very much rely on the person's own and already set kind of concerns and goals.*

Key words: action, data, information, knowledge, interaction, communication, phenomenology, ontology, etymology, Heidegger.

Introduction

Action, information, knowledge, life and world are deeply inter-related notions, ideas, or words. If one tries to give an explanation of any of these it is probable that one uses some of the other words referred to above to point out the meanings one wants to state. In order rigorously to elucidate some of these connections, namely between action, information and knowledge, in relation to interaction, I will ground ontologically the analysis that follows on Heidegger's phenomenology of humanness, the remarkable *Being and Time* (Heidegger 1962 [1927]).

Much social sciences thinking usually tend to take for granted a kind of a linear relationship between action, data, information and knowledge. Information is the central notion at stake. Information *without meaning* would be data – [data is? "any

representation such as characters or analog quantities to which meaning is, or might be, assigned" (ANSI 1990). Thus, this usual approach gets information caught in a circle: information would be data with meaning – ?information is? "*data that has been processed* so that it is meaningful to a decision maker to use in a particular decision" (Hicks 1993:675; italics added). From here one adds 'experience' and departs onto the realms of knowledge. Although this analysis might be quite useful, we argue that it do not stand up to phenomenological scrutiny. This kind of somehow taken for granted classification is untenable because data already is meaningful. Nonetheless a rigorous account of the etymology of *data* and *information* confirms indeed subtle distinctions between the phenomena of above and their relation with action and goals; more precisely, *my* action and *my* goals, as I already am engaged in them.

Possibly, the route we follow in here is not as linear and easier to grasp as the mainstream actual discourse on these themes; but it is no argument against a phenomenological route to observe that the path of questioning does not promise to deliver a clear and simple articulation of the issues at stake. Cartwright (1983:53) noted that "[t]here is no reason to think that the principles that best organise will be true, nor that the principles that are true will organise much"; and Nietzsche (1968:273) commented: "The most strongly believed *a priori* "truths" are for me— *provisional assumptions*; e.g., the law of causality, a very well acquired habit of belief, so much a part of us that not to believe in it would destroy the race. But are they for that reason truth? What a conclusion!"

The paper is structured as follows: first we establish the ontological primacy of action as ground with the help of some of Heidegger's (1962) phenomenological arguments; this is followed by a presentation of a phenomenological account of the phenomena of data and information, complemented by their etymological examination. Finally, from the ground opened up thus far, the paper concludes by briefly elaborating on action, information, and knowledge as they are in-the-world, that is, as mine, in *mineness* (Heidegger 1962).

Acting-In-the-World

Let us very briefly review some of Heidegger's (1962) central findings. *Being and Time* tries to give an account of the world as it is, i.e., it tries do uncover the world as always and already previously experienced by us, before empiricism or intellectualism elaborate any explanations whatsoever. The world *is* instead of is not, and because we are always and already in the world, the beings we ourselves are, are revealed as *beings-in-the-world*. Thus, in-the-world, that is, always and already involved with a future and a past, we are experts in acting. Action as such is primary.

Man is the kind of being whose *Being*, that is, whose essence, is an issue for himself. Thus, *caring* for ourselves and the world, we are essentially *ahead* of ourselves, always and already projecting into the future. In this projecting we are revealed as beings *thrown* into the world, because always with a past and a future in which we are to make something of ourselves. Thus, as a *having been* in-the-world, we care:

things matter to us. As beings-in-the-world we are *with-others*. Most commonly we act, choose, think, live, mainly as *they* do it.

Immersed in-the-world we always and already understand the world and ourselves. Intuitively, dealing with beings, we choose, abandon and fulfil the possibilities we open up for ourselves. The having-been that we are and the possibilities in which we are immersed shape ourselves, mould our dispositions, and as such they open specific possibilities for us in the future. The congruence that leads us to repeat what has worked is the instinctive behaviour to maintain ourselves as what we are for ourselves, that is, in *mineness* (Heidegger 1962) as projecting and explicitly or implicitly assuming possibilities for being in the future. Always involved we take stands, choose, and go along with others, on account of the *throwness* and the projections we *are*.

Hence, in-the-world, as a projecting having-been, we are grounded in the future. It is the future, the possibilities for being in which we always and already are projecting ourselves that makes us the kind of beings we are. Thus, the future *per se* belongs to the essence of man. The future grounds the present and the past. In action we are primary directed towards the future; in this directedness we are again directed towards a successful adaptation to our environment, which is something accessed in our own terms, that is, according to our identity or in mineness.

A logical and equiprimordial feature of being-in-the-world, as ontological ground, is an assumption that action is primary; that it precedes reflection. This primacy of action has its oldest claims in Heraclitus' thesis of a forever changing reality. Action is that which always and already is. We are always and already acting within our own history against the background of temporality: we are action in essential terms. Being-in-the-world is essential to *who* we are. It is important to note that this *being-in* (Heidegger 1962) is formally indicated as a verb, and that a verb is the disclosure of an already in place action because it points to movement, a change, a deed, a result, an action. A verb indicates what a person or a thing does. It can describe an action (e.g. run, hit), the occurrence of an event (e.g. raining, happening), a state (e.g., having something, appearing something), or a change (e.g. become, grow) (OPDT:860). A verb means an action that is occurring, or the results of an action that has happened. Absorbed in coping with day to day activities, immersed in *the they* (Heidegger 1962) or in a *moment of vision* (Heidegger 1962), we are always acting, either appropriating possibilities for being or putting them aside. All the phenomena of data, information, meaning, communication rely on these grounds: we are always already involved, acting.

The way the world is self-evident is first revealed *as we live in the world*—as we are already going on in our dealings in and with the world. World, firstly and primordially, reveals itself in the background practices in which we dwell. *Being-there* is an embodied understanding of the world in-the-world. The modes of being we encounter in the world—the *ready-to-hand*, that is, the transparency of an thing while we use it, and the *present-at-hand*, that is, the thing as we analyse it and look at it—are founded upon an always and already unfolding acting-in-the-world (Heidegger 1962). The present-at-hand is founded on a primordial ready-to-hand that world as such already is. It is on the basis of a *withdrawn* world, a ready-to-

hand background, that something present-at-hand can show itself. Either modes of being presuppose the unfolding of action. We are always already being-alongside-the-world-the-others-the-objects-and-nature, involved, deciding, moving, choosing, going, standing, taking sides, fulfilling possibilities, happening; in short, we are *acting(being)-in-the-world*.

Other people, personal computers (PC), mobile phones, desks, cars, books, memos, and other devices presuppose a context of action-in-the-world. A person's dealings in the world constitute the background on which he himself or she herself distinguishes any entity. The modes of being of entities he or she encounters come from his or her own already acting; not from some specific action, but from himself or herself as action. The person is thus action as such, and it is from that perspective that one has to make sense of his acting. While the objects are unavailable or occurrent – that is, present-at-hand (Heidegger 1962) – the person analyses or stares at them, taking those specific kinds of action, already relying in a context of *ready-to-hand* equipment. Hence, the modes of being we encounter in the world—the ready-to-hand and the present-at-hand (Heidegger 1962)—are founded upon an always and already unfolding acting-in-the-world.

Since we-already-are-in-the-world, the mode of being of ready-to-hand uncovers itself as a primordial access to the world in which we dwell. This means that dealing-with is fundamental to an essential knowing of what an item is. A media professional, a consultant, an academic, a technician has always and already an understanding of the world. His *existence* is, in each case, the possible ways for him to be—to choose, to take, to fulfil, to disclose, or to pass over; this is precisely what it means to be acting. A person has already fulfilled and lost possibilities. In her or his throwness she or he is always what she or he has been, and as such she or he can never start anew.

We are always already being-alongside-the-world-the-others-the-objects-and-nature, involved, deciding, moving, choosing, going, standing, taking sides, fulfilling possibilities, happening; in short, we are *acting(being)-in-the-world*. It is important to note, as referred to above, that *being-in* (Heidegger 1962) is formally indicated as a verb, and that a verb is the disclosure of an already in place action because it points to movement, a change, a deed, a result, an action. Thus, having been thrown, we are always and already taking a stand in the process of having been—"I take action" (Heidegger 1962:367).

Information as Difference

In-the-world, immersed and acting in its niche, a person is already concerned and making distinctions. She/he dwells in the familiar and notes the different. Already-in-the-world, a person is always relying on a background of meaning against which she/he makes distinctions; that is, against which she/he spots differences. These are detected in accordance with the throwness and projectedness in which she/he is at each particular instant.

Let us now address the issue of information within this action and heideggerian based context. As mentioned above current literature usually identifies data as

entities *decontextualised* from appropriation by a particular person. So, typical instances of data would include signs on a screen, a list of numbers in a report, or a memo about performance. We believe this kind of definition cannot withstand a rigorous phenomenological scrutiny. We claim that there is no meaningless data. Data has meaning just as information does. As long as there is a perturbation of the living being, the human being, any kind of data whatsoever has an *informing* character. The way in which data already has a sense, since it was distinguished— that is, differentiated as something in the environment—is personally determined. The sense that any data has as a distinction that was distinguished is thus dependent on the person himself, on his own structures, throwness and projectedness at that particular instant, not on the perspective or point of view of any external observer.

Some examples can help us to stress the relevance of this point. Our familiarity with a new entity—whether or not it is physical—results from experiencing it, in the phenomenological sense, many times. An unconscious induction is performed throughout this process (Schmitt 1996:141). It is our acting and involvement in the world, our lifeworld in Husserl's (1970) terms, that familiarise us with others, objects, events, ideas, concepts, and so forth. This familiarisation happens within, in and on our terms, that is, in accordance with the person who is experiencing them, in mineness.

Sacks (1995:127) describes the case of a 50-year old person whose sight was surgically restored after being blind since early childhood: "On the day he returned home after the bandages were removed, his house and its contents were unintelligible to him, and he had to be led up the garden path, led through the house, led into each room, and introduced to each chair…" Who he was, that is, the structures of his *having been,* did not include visual perception, thus he could not make sense of what he saw. This same argument is also valid for less unusual and dramatic examples. "As newborns we may look at a cat, but we do not perceive 'catness'. In fact, as infants, we do not see a cat at all, but a confusion of shapes and colors, of light and dark (…) From that point on, (…) ?we? begin to work overtime, making connections between one thing and another until a coherent picture begins to emerge. One set of movements, patterns, shapes, smells, and tactile sensations slowly evolves into Mom. Another set becomes the cat (…)" (Whitehouse 1999:108).

This relevance of what we have experienced and how we have done that in relation to our possibility of new experiences is something we continue to testify all our life. Take a relatively trivial example: sometimes when we meet someone we know reasonably well mainly from encounters in a particular context—the office or the neighbourhood, for example—we might not initially make sense of who he or she is when we meet in a completely different context. This occurs because the references we pick up in that context omit the ones we intuitively use to identify the person in question. Similarly, when we do not know a person well we just cannot recall who he or she is when we meet in a different context; often we will not recall who that person is until we see her or him again in the initial context in which we met. These cases can be very perplexing, as many of us have experienced when entering a conversation with someone we know, but cannot remember who he or she is…

Heidegger (1962), Maturana and Varela (1980, 1992), and others (e.g., Palmer 1969, Introna 1997, Gadamer 1975, Hoy 1978, Polanyi 1973) show that there is no position outside history from which one can make sense of our own engagement in the world. In order to show how meaning arises within a personal historical context, that is, within the concerns and aims I myself am, we will use the *hermeneutic circle,* acknowledging the self-interpretative nature, that is, the hermeneutic nature of the human being (Heidegger 1962).

The message, the new text as something distinguished, is firstly accessed by me, us or you, as something separated, part of an environment against which it was distinguished. A person selects, interprets, and reacts in relation to whatever she or he distinguishes in the environment, according to her or his own terms. As such a human being does not receive 'objective' data from the environment or from other human beings. We access what we come across in the world in accordance with what we essentially are and in relation to that which we actually are, that is, in our own terms – in mineness.

The hermeneutic interpretative process concedes that there are limits to our ability to make sense of elements in the environment; however, it strives to overcome these limitations to some extent. The text, that is, a new distinction, is something that needs to be brought forth. Its meaning is not something given and 'out there', forever standing still. Meaning is something that one must find in a human *work*, as such. Natural sciences have developed methods to understand natural objects. When those methods are applied to understanding human works, what arises can only be an understanding of works *as* objects—as silent, natural objects. For exact sciences, interpretation is regarded as the analysis of a given set of data. Nevertheless, it would also be correct to identify as interpretation the seeing and selection of the data. Aristotle (1998) situated interpretation earlier than logical analysis. Logical analysis is interpretation, but a prior and foundational interpretation is indeed that judgement on which a search for something bases itself. This is so because no method can escape itself: "Method and object cannot be separated: method has already delimited what we shall see. It has told us what the object is *as* object. For this reason all method is already interpretation, and the object seen with a different method will be a different object. (…) Explanation will, certainly rely on the tools of objective analysis, but the selection of the relevant tools is already an interpretation of the task of understanding. Analysis is interpretation; feeling the need for analysis is also an interpretation. Thus analysis is really not the primary interpretation but a derivative form" (Palmer 1969:22-3). Hence, the human imprinting on a work is it is meaning. The "'deciphering' process, this 'understanding' the meaning of a work, is the focus of hermeneutics" (Palmer 1969:7-8).

Hermeneutics attempts to examine human works *as such*. It tries to take into account the contexts where the message comes from and which the interpreter inhabits. The meaning of a new distinction gets its first sense from the context, the concerns and aims, in which we are already immersed. There must be some level of pre-understanding, some fore-conception, to grasp any sense of the new data (Palmer 1969; Heidegger 1962). Thus, to some extent, the condition for understanding new data is to have already partially understood it. "?S?omehow, by a dialectical process, a partial understanding is used to understand still further, like using pieces of a

puzzle to figure out what is missing" (Palmer 1969:25). The actual context and our history do not need to provide a full explanation of the new data, but rather to enable a first linkage between the context and the new element. This first sense is not yet an explanation of the new. The first grasping is the capacity to make some sense of it. This some sense is taken into account to re-interpret the context, which opens up new possibilities. From this re-interpreted context, further understanding of the new element can again be gained. This circular movement is called the hermeneutic circle, and it has neither a clear beginning nor a clear ending.

As our understanding progresses, context becomes the text, and vice versa. "Hermeneutic circle refers to the fact that in interpreting a text one must move back and forth between an overall interpretation and the details that a given reading lets stand out as significant. Since the new details can modify the overall interpretation, which can in turn reveal new details as significant, the circle is supposed to lead to a richer and richer understanding of the text" (Dreyfus 1991:36). This evolving understanding cannot be said to be 'richer and richer', but just different. Only on the grounds of its relevance to the survival and thriving of the being can one *a posteriori* draw a conclusion about the usefulness, or otherwise, of a given understanding. This is similar to Nietzsche's (1974:169, n.110) observation: "(…) the strength of knowledge does not depend on its degree of truth but on its age, on the degree to which it has been incorporated, on its character as a condition of life".

The hermeneutic circle explains how the Heideggerian referential whole (context, concerns, aims of a person) provides meaning to the new text (other person, event, etc.) and how this perturbation changes the referential whole in an ongoing movement. Any new element must enter the horizon of the subject on his' *own terms*, that is, in accordance with its identity, in mineness—which is the signification of the 'in' of the word *in*formation, as we will show below.

Hence, no information is ready-made out there in the environment, waiting to be accessed by us. No dialogue has necessarily the same meaning for any two persons. The world we bring forth, the one in which we always and already find ourselves, is personally determined, according to who we are as a having been. This is clear in the celebrated episode of Newton's discovery of the law of gravity. Isaac Newton was in the shadow of a tree when an apple fall on his head. This, we are told, led him to discover the law of gravity. This story is often used to suggest that luck has an important role in scientific discovery. But, just consider, how many people before Newton had apples and other objects falling on their heads, never leading them to such discoveries as that. It took a man like Newton, who was a *having been* of many years of scientific preparation, for that event—that perturbation—to trigger the kind of compensation that led to the discovery of the law of gravity. A simple fact, the falling of an apple, thus can indeed have very different meanings and consequences on grounds of who is perturbed by that fact.

This argument on action, information and knowledge is also supported by Werner Heisenberg's dictum in that, nowadays, namely within the domain of quantum physics, *man encounters only himself*. Heisenberg's argument, triggered by the way in which quantum physics is essentially dependent of the technological apparatus, within the context of this paper, is pertinence to the human experience, as pointed

out by Heidegger (1977:23, 27). Quantum physics, the branch of science on which are based much of the recent developments on IT, studies the properties of the smallest materials, the particles ('particles' or 'waves'; what is found, either particles or waves, can be said being related with what the scientist was previously looking for…). Particles, or wave, as such cannot be studied without taking into account the way in which they are observed – the observation is a disturbance. The epistemological consequence of this is that the laws of nature, mathematically formulated in quantum physics, do not apply to particles, as particles, but to our knowledge of particles (Tijmes 1995). This makes the representation of objective reality to evaporate—"we can only objectify our knowledge of these particles" (ibid.240). Man is not only an observer of a world but an author of it as well. Thus, in bringing forth a world, "man encounters only himself". Nietzsche (1968:272, n.495) pointed also to this phenomenon: "We can comprehend only a world that we ourselves have made". This aspect, which is emphasised as well by Hannah Arendt (1958:261)—"(…) whose qualities [of the world] we know no more than the way they affect our measuring instruments"—makes the our argument particularly compelling for the addressing of contemporary technological based global dialogue.

Summing up, we bring now to our argument Bateson's (1979) maxim: information is a difference that makes a difference. The *first* difference is thus the Heideggerian difference between something that is captured and nothing. The *second* difference is the meaning of the distinction, that is, the relationships in which the new distinction gains its references. This *second* difference emerges within our historicity, concerns and aims, our throwness and projectedness; it emerges, being what it is, in mineness. As such, information belongs to bringing forth a world; it is enmeshed with the primacy of action.

Information can be formally indicated as the appropriation of distinctions—of data—by a particular person when involved in activities using that data, *making it present*, towards a goals, in-order-to achieve some result or to perform some activity. Information is thus an inward and individual process of making distinctions relevant to the course of actions within our involvement whole (Heidegger 1962). Once a person has made an initial distinction, it gains further meanings as she or he relates it to other distinctions—such as other people ideas, objects, concepts, issues, and so on. This meaningfulness keeps on evolving as, for instance, a person gets involved in a *situation* in which that distinction is *made present*. The more this initial distinction—what we would call data—gets into the involvement whole of the person, the more can it be identified as *information* because it informs the actions the person takes.

In our always and already involvement in the world, entities show up to us already referring one to another. Their showing up is essentially their referentiality. Differences are the showing up of something *as* something. An entity is its relationships with other entities. A difference has a sense that enables it to be the difference it is. This first sense of the new hermeneutic text or element is the meaning of the difference. That something has meaning indicates a relationship between it and another something. This relationship is disclosed in terms of our involvement whole. It is our involvement whole, the world of references and involvements that we are, that gives meaning to what we distinguish. For a

distinction to be a distinction, therefore, it must already have meaning. Data as it is distinguished already is meaningful. Its meaningfulness, that is, its sense, is precisely that which enables the operation of distinction.

Meaning is the references and assignments of a distinction. Meaning is the sense that a distinction has to have in order to be a distinction. Meaning is already there, in-the-world, and we cannot decide on what such and such means or does not mean to us. "Meaning is that wherein the understandability of something maintains itself— even of something which does not come into view explicitly and thematically" (Heidegger 1962:370-1). So, there is no meaningless data, as Introna (1997:3-5) also argues. "Just as we do not see pure meaningless sense data which then must be interpreted, so we do not hear pure meaningless sounds" (Dreyfus 1991:218). "We hear the door shut in the house and never hear acoustical sensations or even mere sounds" (Heidegger 1971:26). "What we 'first' hear is never noises or complexes sounds, but the creaking wagon, the motorcycle… It requires a very artificial and complicated frame of mind to 'hear' a 'pure noise'" (Heidegger 1962:207). In-the-world, the things themselves, in their meaningfulness, are much closer to us than all sensations (Heidegger 1971:26).

"Everything has meaning" (Merleau-Ponty 1962:xx), because to be distinguished is precisely to enter the grounds of meaning. When someone refers to 'meaningless data', he or she is just stating that what he or she was given is not what he or she is seeking, in terms of the kind of behaviour in which he or she is engaged; *a contrario*, this analysis highlights that information reveals itself as the *right* data for the course of action foresighted in advance. The inward formation of information is thus driven by action. The appropriation of data in its usefulness, in our engagement in the situation, informs us about specific courses of action or decisions which could be taken.

The unfolding of action happens in two ways: either while the person is fully absorbed in her activities when she is dealing with available information; or while she first thinks about, and analyses ocurrent data before deciding what specific action she will take. The meaning of information, that is, its relevance in terms of action, is embodied by the person as she relies on it within a background of intelligibility to act and perform in-order-to achieve some result for-the-sake-of being a good person, or of getting a good evaluation from her superior.

In-the-world, information is thus the realisation of the meaningfulness of data in a situation. It is an action-based *making present* of the sense of the distinctions within the referential whole in which we dwell. By making present data, a person, in-the-world, in a situation, within a projection he himself or her herself is, opens possibilities that makes sense for who he or she is as a *having-been*. As she/he uses data to perform some activity, she/he gets into an in-order-to and data *informs* her/his actions; as this data is relied on in action, it can be referred to as information. The making present of data—what information is—receives its meaning from the taking up of a possibility for being. Data shows up as the right data for the relevant course of action; for the course of action that is meaningful for the person as she/he lives her/his life. Information thus receives its meaning from the primordial understanding of Being that Dasein itself is: a ceaseless chooser, on accounts of

what she/he has been and what she/he is projecting herself/himself to be, taking informed action.

Below we strengthen the analysis carried out thus far by presenting a phenomenological account of the etymology of data and information.

Etymologies of Information and Data

The current meaning of information can be synthesised as: "what is told; news" (OPDT:388). The English word information, a noun, was coined in the 14th century (MW) and has come to have two connected meanings. One refers to the communication of something, for instance an event, a fact, a story—"the communication or reception of knowledge or intelligence" (ibid.). The other meaning points to the gathering of data—"knowledge obtained from investigation, study, or instruction: intelligence, news, facts, data" or "a signal or character (as in a communication system or computer) representing data" (ibid.)

The word information itself, according to Boland (1983:363), reveals to us the essence of the phenomenon: "[t]he essence of information is revealed to us in its name. Information is an inward-forming". This *inward-forming* is suggested in the above definitions, for example in expressions such as knowledge, intelligence, investigation, or study. The meaning of inward-forming comes from the Latin origins of the word information—the word *in-formo* (Crane 2000; Cunha 1982:436, 364, 429).

According to Crane (2001), the Latin verb *in-formo*, which joins the expressions *in* and *forma*, means "to give form to a thing, to shape, form, mould, fashion (…) To form an idea of a thing, to represent, sketch, delineate (…) To inform, instruct, educate". The verb *formo*, to which the noun *forma* is related, means to shape, to fashion, to form, to adjust, to regulate, to dispose, to direct, to prepare, to compose. *Forma*, a feminine noun, means "form, in the most comprehensive sense of the word, contour, figure, shape, appearance". In general, it means shape, form, nature, manner, or kind.

Form has been an English word since the 13th century. It has its origins in the Middle English *forme*, which in its turn has its roots in that Latin word *forma*. Form has nowadays a plurality of meanings. Amongst the most used and relevant for our purpose, are the following: "the shape and structure of something as distinguished from its material"; "a prescribed and set order of words", "a manner or style of performing or accomplishing according to recognized standards of technique", "an orderly method of arrangement (as in the presentation of ideas)", "a manner of coordinating elements". In its transitive sense, 'to form' means "to give a particular shape to", "to model by instruction and discipline", "to arrange in order". The intransitive sense 'to take form' means to "come into existence" (MW).

This tracing back of some original meanings of the word information discloses the notion of a thing, or idea, that receives a form, a shaping, or a contour. The Latin word *informare*, from the verb *in-formo* (Crane 2001), "as Cicero (106-43 BC) used it, meant to impose a form on some thing, particularly on the mind, in order to

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instruct and improve it" (Borgmann 1999:9). All these notions point to the idea of a certain arrangement or order.

At this point, we need to raise the question of how this *form* is achieved. The answer lies in the way the Latin word *informare* includes the Latin *in*, which means "within, on, upon, among, at, into, to, towards". It "denotes either rest or motion within or into a place or thing" (Crane 2001). The English preposition 'in' comes from this Latin root and is used "as a function word to indicate inclusion, location, or position within limits" (MW). The *in* of information thus means that a form, a shaping, a contour, is imposed on a thing or an idea. In a more general sense, a form or contour is imposed on a difference. This difference, distinguished from the environment, is brought in/into that which imposes those same contours or that form; the being who captures the difference is the entity that is the *in*. It is the human being who, while perturbed by a distinction, brings the new element that was distinguished "within ?the? limits" (ibid.) he himself is—that is, in mineness. A form derived from within is therefore imposed on a distinction. These limits are thus bounded by throwness and projectedness. Information is the bringing forth of the sense of a distinction, through a process that is, strictly speaking, dependent on mineness. From a hermeneutic standpoint, the limits are the context on the grounds of which a new element comes to be distinguished and gets a first sense.

To grasp this phenomenon fully, we now examine the etymology of the word data, which has been part of the English language since the 17th century. It comes from the Latin, where it was the plural of *datum* (MW), which means what is given: "to give, offer, convey, offer, donate, furnish" (LEDH 2001). The Portuguese language still preserves this characteristic of something *given* in the word data. The word data is translated in Portuguese as *dados*, which is also a form of the verb *dar*—meaning to give. Data is not only something given, but it is *essentially* given. It is something we access, obtain, get without effort; data comes to us, as something given: "*data* is plentiful and easily available" (H. A. Gleason, Jr., quoted in MW). Data is the difference a being distinguishes from its environment as such. This notion of data, at its fundamental level, is equivalent to the idea of being. The ontology on which this investigation is based assumes being (to be) as the difference, either in actuality, in the past or in the future. Data is given, comes to us, much in the sense that Heidegger referred to the way that "being gets to me" (in Dreyfus 1991:239).

Nowadays, with the worldwide spread of IT devices, this given-ness of data supports its utilisation as "factual information (as measurements or statistics) used as a basis for reasoning, discussion, or calculation" (MV). This factual information, "information in numerical form that can be digitally transmitted or processed" (ibid.), is thus that which is given. As such, data is part of our dealingness in-the-world.

This analysis raises a question about whether it points to recognition that the notions, the distinctions, of data and information are synonymous. The answer is both yes and no. We recall that a distinction is always a distinction for someone already immersed in a whole of references (Heidegger 1962), engaged in his own life, involved in-the-world, aiming at something (ibid.). Always-and-already in the world, anything a person can distinguish from a background already has some sense.

Thus, from the perspective of the living being as it lives its life, both data and information are always an inward-forming.

In fundamental terms, there is no difference between data and information, as both are meaningful because they were distinguished from their backgrounds. However, we have identified differences between them because they were revealed in their differenceness, and they were inwardly formed by the person's access to them. So, from a theoretical perspective, keeping in mind the unity of the phenomenon, it might be useful to distinguish these notions.

A subtle distinction should be highlighted here. Human beings are self-observers. As such, we observe the behaviour of ourselves performing the kinds of reactions triggered while we act immersed in an always and already capturing of differences. Thus, from an observer's standpoint—even if the observation is a self-observation—a stricter signification of the inward-forming is its relevance to a particular course of action. The person relates its behaviour to the particular form, shape, or contours of some specific distinction he has made; the captured difference stresses its inward nature as it is a forming, a specific intentional involvement that the person takes as relevant to her or his own life. From this perspective, the difference is appropriately called information.

Information is thus the kind of difference whose fundamental meaning relies on its *forming* nature. It is the difference formed inwardly in a meaningful manner that affects the current behaviour of the living being as testified from the perspective of an observer or self-observer. Information is thus mainly that which is formed. Data is the kind of difference whose fundamental meaning relies on its given-ness. It is the difference that is given as such. Analysed from this perspective, data does not affect the current behaviour of a living being, from the point of view of an observer or self-observer. Data is strictly that which is given. Taking into account the above description of information, data thus can be said to be decontextualised information. So, from an *ex post* perspective, data is fundamentally *given* and information is fundamentally *formed*. These notions arise against the grounding criterion of action. The difference is formally indicated as information or as data in terms of the course of action in which a person already is involved.

This analysis is supported by a further twist in the etymology of the word information. To the Latin words *in* and *forma*, the English word information joined the suffix *-ation,* which has its origins in the Middle English *–acioun*. This comes from the Old French *-ation*, which in its turn comes from the Latin *-ation*, *-atio*. These Latin expression meant action or process (MW). *Actio, actiônis* meant "a doing, performing, acting, action, act" (Crane 2000). Thus, action is the meaning pointed to by joining the suffix *-ation* to the expressions *in* and *form*; this *in-form-ation* indicates an action that informs. This action that informs has its ontological meaning in that action, as necessary for information, must be prior, that is, is the ground on the basis of which any data whatsoever might or not inform. Thus, data informs because action is the ground. So, information gets its meaning from and is directed to action. Action is therefore the initial criterion for a distinction to be distinguished. It provides the grounding that makes it possible to distinguish something *as* something.

Mineness as Action

Already acting, we always make sense of a world that matters to us. We do not come to understand the world by reflecting on it, but rather we already understand it in our already ongoing action, in-order-to, for-the-sake-of-which. Our understanding of the world is that which distinguishes us in our essential way of being—"In ordinary language we… say 'He understands how to handle men', 'He know how to talk'. Understanding here means 'knowing how', 'being capable of'" (Heidegger 1985:298). This knowing how is our ability to cope in the world—it is not a knowing that, a capacity to explain this or that. To understand something has the meaning of 'being able to manage something', 'being a match for it', 'being competent to do something' (Heidegger 1962:183). Since action is where it is grounded, understanding means understanding-how-in-action. Thus, understanding reveals the world as the primary ready-to-hand entity; as such, this primary readiness-to-hand is embodied knowledge, revealed in mineness in action.

This ontological understanding is previous to articulation and reflection. "We are always already experiencing and acting in the world before we ever question or explain an experience" (Mingers 1995:94). Only because we already understand the world can we make assertions about it. As Polt (1999:68) notes: "propositions are not a good clue to the essence of understanding, because we must already understand things *before* we formulate propositions about them (…) More fundamental than any assertion we may make is our ability to *do things* in the world in the first place." Thus, in-the-world, already acting, we accept explanations according to criteria that fit our *praxis* of living.

We always have a knowing how of being-in-the-world. As we find other people, PC, mobile phones, TVs, cars, and other entities in the mode of ready-to-hand, we enter a knowing how of these entities, that is, we understand them—"understanding a ?computer? at its most primordial means *knowing how* to ?compute? " (Dreyfus 1991:184). IT devices—hardware, software, or even concepts—are things to be used, as "(…) things are objects to be treated, used, acted upon and with, enjoyed and endured, even more than things to be known. They are things had before they are things cognized" (Dewey 1929:21). To have something, while acting with it, using it, or engaging ourselves with it, means to know it; the contemporary meaning of the verb 'to have' includes this 'to know' (OPDT:342). As we experience the world, we understand the world, it is what it is in mineness. Whenever we reflect upon something, we always assume another something in which we base ourselves, in which we dwell – "knowing presupposes dwelling" (Polt 1999:48).

Our beliefs and explanations are judged valid if they satisfy us according to criteria we assume are appropriate and pragmatic, "rather than by virtue of being true or false" (Mingers 1995:93). Validity, and to some extent the whole idea of truth, depends on ongoing coupling, as Nietzsche suggested a century earlier: "The falseness of a judgement is to us not necessarily an objection to a judgement (…) The question is to what extent it is life-advancing, life-preserving, species-preserving, perhaps even species-breeding" (Nietzsche 1990:35, n.4). Explanations are secondary to the actual praxis of living; they occur within it and they feed back

into ongoing behaviour. The interactions that a person or organisation undergoes with other people and organisations are not determined by some kind of a linear process. Instead, the interactions are reciprocal perturbations between the entity and its environment. The other person, things, descriptions, nature, involvements, and references only trigger actions by the person or by the organisation; they do not specify the actions.

In our ongoing coupling with the environment, there are no 'causal relations'—this notion refers to the domain of descriptions, not to the domain of acting. As coupling goes on—as a person or an organisation keeps on being—we adapt to the environment rather than know the environment, in the common sense of the verb to know. This adaptation in action is a *knowing how* to live; it is to live as to know, it is life as understanding.

Every distinction, every meaning we encounter in our everyday coping in the world, is based on a background of intelligibility revealed in our social history. In-the-world, we are firstly attuned by our own pre-rational familiarity with the world and the millennia of our cultural and philosophical tradition (Polt 1999:67), which we embody and take for granted. "That whole kit bag of regularities proper to the coupling of a social group is its biological and cultural tradition. Tradition is not only a way to see and act, but also a way to conceal. Tradition consists of all those behaviours that in the history of a social system have become obvious, regular, and acceptable. Since they do not require reflection to be generated, they are invisible unless they fail" (Maturana and Varela 1992:246).

We recall Sacks' (1995:127) account of Virgil's recovery of sight: "As Virgil explored the rooms of his house, investigating, so to speak, the visual construction of his world, I was reminded of an infant moving his hand to and fro before his eyes, waggling his head, turning it this way and that, in his primal construction of the world". This is a strong example that helps to uncover the ways in which tradition—that is, behaviour, practices, and meanings—gets established by developing an embodied meaning of the world. Our background of intelligibility, embodied as we become Dasein, is the initial reference, the historicity that grounds the meaning we find in things in our daily coping in the world. We do not decide the meaning of the world we have already found, but rather the world is found because it shows up meaningfully.

Involved, coping with entities in-the-world, we respond in the situation on the basis of the readiness of the world. "One responds on the basis of a vast past experience of what has happened in previous situations, or more exactly, one's comportment manifests dispositions that have been shaped by a vast amount of previous dealings, so that in most cases when we exercise these dispositions everything works the way it should" (Dreyfus 1991:68).

One responds by making present information on the basis of the readiness-to-hand of the world, as revealed in our involvement whole. Information grounds its essence in action in that actions transparently follow actions informed by the readiness-to-hand of the vast past experience of what works, which we ourselves embody (Varela et al 1991). The instinctive disclosure of information's readiness-to-hand is our ontological understanding of the world; this, usually, is called knowledge, a direct

and non-mediated access to the world. To know, thus, is "to perceive directly: to have direct cognition" (MW). Knowledge is immediate, not dependent on any other activity or operation; knowledge is the way we work, relying on the congruency between our structures and environment. Knowledge is, to some extent, the making present of data that information is without the 'making' because it is information already there, embodied, in mineness. Knowledge is the *presencing* of information in us, as already acting beings. In its readiness-to-hand, knowledge—as a knowing how revealed in action—belongs in the background. Knowledge is that on the basis of which a distinction gains its meaning; it is what we rely on to perform some activity, or to distinguish a new element. In hermeneutic terms, knowledge is the context. Knowledge is the living being itself, as it is, alive (besides Heidegger (1962), this position finds fundamental support in others texts, such as Maturana and Varela (1980, 1992), Polanyi (1973), Wittgenstein (1967), the Oriental tradition of the Oneness between the self and world (e.g., Nonaka and Takeushi 1995:27-32)).

We should recall that the phenomena of action, data, understanding, information, and knowledge—as they are what they are in the world—are united. The notions of data, information, meaning, and knowledge serve only as ways into the whole that is this phenomenon. When specifying these notions, our intention is to provide a formal indication of particular kinds of experiences and, as such, to try to gain fresh insights into the richness of references that constitute the phenomenon of human action.

In trying to uncover how these notions relate to each other, one might start by asking how does data become knowledge. The answer is that in-the-world understating, and thus knowledge, always is there already, firstly. Any distinction can be grasped—established within a horizon of meaning—only because the living being already knows how to relate/distinguish that same distinction. The person who identifies data is already in knowledge. Data appears only against a background of knowledge. The kind of data that might appear is dependent on the type of knowledge that constitutes the background; that is, what we know constrains what we might detect anew. Those distinctions we could possibly come to spot are limited by what we know, as we are, at each moment. Thus, what we distinguish is dependent on what we have distinguished. The way in which this dependency works is exhibited through the notion of information.

As a person counts on data to perform some activity, we can say that data informs his or her actions. Information is the *right* data for the course of action undertaken. Action is an appropriation of data, whether it is body movements, speaking, reflecting, or deciding. The relevancy of data for a person's actions, that is, for the meaningfulness of his or her behaviour for himself or herself – i.e., in mineness –, is incorporated into the vast experience that he or she is at each moment. The way data is non-thematically perceived by the person to have worked could confirm his or her intended behaviour or it could raise doubts, more or less radically, about that same behaviour. When doubts arise, a person's projectedness changes; the person learns and the meaning of the data that triggered that changing/learning behaviour opens new possibilities for him/her to act. From then on, relying on information that changed him/her, the person is able to distinguish what previously he/she was

unable to, because he/she did not have the structures – the throwness and projectedness – to spot new kinds of differences.

In-the-world we are experts in acting. Intuitively, we repeat what worked—this is what we *know* best. "We are not databases stocked with trillions of propositions that orient us in life. Oriented living comes first" (Polt 1999:69). Understanding the world, some actions immediately show up as doable, as making sense, and others as not. Whatever doesn't seem to work, either because it did not work before or because it counters what has worked, shows up as non-feasible ways of acting (Dreyfus 1991:185). On the other had, anything which has worked has shaped our structures, moulded our disposition, affected our *attunement* (Heidegger 1962)—as such, it has opened specific possibilities for us to act in the future. The structural congruence that leads the person to repeat what has worked is the instinctive behaviour to maintain himself as what he is for himself: projecting and articulating possibilities into the future. This aspect is crucial, as it shows that knowledge gets it primordial meaning from the future. In short knowledge is grounded on the need of the living being to keep itself alive as what it is for himself or herself.

"Dasein has, as Dasein, already projected itself; and as long as it is, it is projecting" (Heidegger 1962:185). The person is an issue for himself; he has to be what its possibilities open up for him. He is always involved in something in which he takes a stand, he chooses, he goes along with the others, he withdraws, he goes this or that way. He always and already understands himself in terms of possible ways to be. "I'm a manager" means that this is a way in which I am meaningfully in the world. The possibility of being a manager is something important I took on for myself. The person who is a manager understands himself and world, to a greater or lesser degree, in terms of that seized-upon possibility. She approaches things, for the most part, as a manager—as someone who *knows how* to manage. This is much more of a determinant of future outcomes than any plans (Polt 1999). Intentions and plans are a derivative understanding of who she is, always formed on the background of being a manager.

Action, data, information, and knowledge are entangled in the ways referred to above. These notions are devised to help us to grasp the essential circularity of action, information, and knowledge. "?T?his connection between action and experience, this inseparability between a particular way of being and how the world appears to us, tells us that every act of knowing brings forth a world" (Maturana and Varela 1992:26)—"?t?o know is to be able to operate adequately in an individual cooperative situation" (Maturana and Varela 1980:57). Knowledge can thus be pointed out as our instinctive embodied disposition, tendency, pattern of behaviour, grounded in our vast experience of what has worked, and directed towards a successful adaptation to our environment.

Concluding Remarks

This paper does not look for definitions. That is neither the aim nor the possibility of phenomenology. In the phenomenological manner of investigation this paper is focused on uncovering some essential contours of the intertwinedness of the

phenomena action, data, information, and knowledge within a deeper context of communication and dialoguing.

The paper points out, or so we hope, the relevance of the course of action in which a person already is involved, his or her concerns, goals, projects and dispositions. We recall a Heidegger's (1962:24) passage: "Every inquiry is a seeking. Every seeking gets guided beforehand by what is sought".

We have pointed out action as the primary ground. The world as such is previously and self-evidently revealed as action. This primacy of action encompasses the being-in-the-world we are and therefore it precedes reflection. The way the world is self-evident for us is first revealed as we are already going on in our dealings in and with the world. Action is that which always and already is.

This world of action firstly reveals itself in the background practices in which we dwell. The modes of being we encounter—the ready-to-hand and the present-at-hand—are founded upon this always and already acting-in-the-world. We are always already involved, choosing, going, standing, taking sides, and fulfilling possibilities.

Living is the living of myself, as such it is a have been thrown into the world. We are in-a-world that is meaningful for us, because meaning itself is something we shape for ourselves. Meaning grounds our actions because it shows how actions fit within world. Information belongs to this bringing forth of a world. It is enmeshed with the primacy of action. It is the difference that makes a difference (Bateson 1979). The Heideggerian difference gains its meaning as it is distinguished by reference to the relationships it holds to other differences.

Information was formally indicated as the reflexive appropriation of differences, of data, that make a difference to us while we are already involved in activities and using that data in-order-to achieve some result. In-the-world, information is thus the realisation of the meaningfulness of data. Data *informs* actions. Information is an action-based *making present* of the sense of the distinctions within the referential whole in which we dwell. In information a person, in-the-world, opens possibilities that make sense for who he is. Information thus is grounded on the primordial understanding of Being that Dasein itself is: a ceaseless chooser.

Human beings are embodied historical systems, in which effective action leads to effective action. It is this circle of acting and knowing that characterises us. What has worked is repeated without notice because it is the way *things should be*. In-the-world we are experts in acting. Intuitively, we repeat what we *know* best. Understanding the world, some actions immediately show up as doable, as making sense, and others as not. When we act non-thematically according to what has worked, information is instinctively disclosed in its readiness-to-hand, and it can be indicated as knowledge. Knowledge is the way we work, relying on the congruency of our mineness and environment. It is a direct, non-mediated, access to the world. Knowledge is grounded on the need of the person to keep itself alive as what it is to himself or herself, that is, in mineness. Knowledge is thus our instinctive and embodied disposition, grounded in our vast experience of what has worked and directed towards our successful adaptation in and to the world. In its essence, knowledge, that is, ready-to-hand information, is instinct.

Dialogues, other people discourses, opportunities and threats might not rely so much on the kind of data a person comes across, but instead they might indeed very much rely on the person's already set kind of concerns and goals. From here there are many implications one can draw for dialogue, for cultural issues, communication and media, globalisation and world politics, conflict management and the management of organisations, training and education, and so forth.

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