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Why being dialogical must come before being logical: the need for a hermeneutical-dialogical approach to robotic activities

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Abstract Currently, our official rationality is still of a Cartesian kind; we are still embedded in a mechanistic order that takes it that separate, countable entities (spatial forms), related logically to each other, are the only 'things' that matter to us-an order clearly suited to advances in robotics. Unfortunately, it is an order that renders invisible 'relational things', non-objective things that exist in time, in the transitions from one state of affairs to another, things that 'point' toward possibilities in the future, which mean something to us. I have called such things, hermeneuticaldialogical 'things' as they gradually emerge in our backand-forth, step-by-step relations to the others and otherneses in our surroundings; they consist in the 'promissory' things sustaining our trust in each other and in our authorities, in our social organizations and social institutions, and in our culture. Clearly, we need to understand better, not only what robots can, and cannot do, but also the long-term ethical and political implications of inserting robotic activities into our everyday ways of relating ourselves to our surroundings if we are to avoid the dystopian futures envisaged by some. Descartes' aim of "making ourselves, as it were, masters and possessors of nature," forgets our larger task of our making ourselves into human beings-of doing together in dialog what we cannot do apart.

 $\begin{tabular}{ll} Keywords & Anticipations \cdot Embodiment \cdot Hermeneutics \cdot Dialogical \cdot Relationality \cdot Social institutions \cdot Bakhtin \cdot Bergson \cdot Buber \cdot Craik \cdot Dewey \cdot Dreyfus \cdot Gadamer \cdot Merleau-Ponty \cdot Wittgenstein \end{tabular}$

"When philosophers use a word—'knowledge', 'being', 'object', 'I', 'proposition', 'name'—and try to grasp the essence of the thing, one must always ask oneself: is the word ever actually used in this way in the language-game which is its original home?—/ What we try to do is to bring words back from their metaphysical to their everyday use" (Wittgenstein 1953, no. 116).

1 Introduction

In our everyday talk, we continuously talk of such mental 'things' as 'thoughts', 'ideas', 'decisions', of 'judgements' and 'knowledge', without any trouble; they are much needed words which pick out different aspects of our activities for attention as they show up in the course of our acting. Our troubles start, however, when we begin to reflect on our activities, and ask ourselves how we come to act as we do. Then we seem to assume that such 'things' as 'thoughts' and 'ideas' exist and we all already know exactly what they are—for how else could we use such words so easily if there is nothing, no 'thing' within us, that such words 'stand for', that they can represent? It is thus very easy for us to think that the things we represent or 'picture' by our words, although seemingly hidden from us, are of much greater importance in influencing how we act than our actual words (or better, speakings) themselves. And it is partly this assumption, along with a number of others to be articulated later, that convince us that we can make selfmoving machines, i.e., robots, not only to take the place of humans in certain settings, but to resemble human beings in appearance, behavior, and/or cognition—where, that is,



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let me add, it is already clear as to what it is that they are required to do.

But, as I want to make clear in this article, what we ignore when we think in this way is (1) both the role of our living bodies, (2) along with the *dialogical* nature of, not only our I-you relationships but also our living relations to the rest of our surroundings; further (3) we also ignore the shaping, organizing, and constitutive function of our talk (our speakings), and the fact that in growing up, (4) we grow into a particular linguistic group with a particular way of talking, (5) along with a particular way of making sense of events occurring in our surroundings.

As Gadamer (2000) puts it: "Language is not just one of man's possessions in the world; rather, on it depends the fact that man has a world at all... This is the real heart of Humboldt's assertion, which he intended quite differently, that languages are views of the world. By this Humboldt means that language maintains a kind of independent life over against the individual member of a linguistic community and introduces him, as he grows into it, to a particular attitude and relationship to the world as well... To have a world means to have an orientation towards it" (p. 443, my itals). In other words, in ignoring the immersion of our activities within this larger, ever-changing, still in development, social and natural ecology, and in focussing our efforts only on replacing those of our already well developed, skilful activities by robotic ones, we can succeed only in, so to speak, counterfeiting human-being-like entities. For, just as money has no reality except in its 'promissory' value as a medium of exchange in the conduct of our transactions—to the degree to which those using it are prepared to honor the future commitments implied in its use so also with the rest of our human behaviors.

The embodied attitudes and orientations with which we go out to meet, to respond to things occurring around us matter. For our cultures work in terms of the expectations we have of how those around us will respond to how we respond to them. Without the operation and sustaining of the anticipations that I have of how you will receive my actions, all trust between us would break down (Shotter 1989). As John Dewey (1929/1958) put it: "To understand is to anticipate together, it is to make a cross-reference which, when acted upon, brings about a partaking in a common, inclusive, undertaking" (pp. 178-179). Thus, those of us who program individual robots to simulate human activities after-the-fact of their performance, run the risk (like counterfeiters and forgers) of appropriating and turning to our own use, our own purposes, and interests, certain communally constructed and sustained resources, which (like money) are among the resources in terms of which the community in fact maintains itself as a human community.

Yet, for me to say this seems outrageous; I seem to be calling into question the ethical good intent of many such

workers. For the whole enterprise seems to be wholly in accord with many fundamental assumptions about ourselves, the nature of our thought processes and the overall (mechanical or 'clockwork') nature of the world within which we all live, along with the very human urge to push our inquiries to the very limit of our ingenuity: "I am never content until I have constructed a mechanical model of the subject I am studying. If I succeed in making one, I understand; otherwise I do not"-so said Lord Kelvin in his 1884 Baltimore lectures. How could things be otherwise? As I mentioned above, our assumption that our 'thoughts' and 'ideas' are basic to our ways of acting seems incontrovertible; we think ourselves into action, don't we? It is this assumption (among others) that we must question, or perhaps, even, reverse: for, what if we talk of ourselves as having 'thoughts' and 'ideas' because we notice (and need to verbally articulate) particular variations on how we act in our relations both to each other and to our surroundings?

1.1 Our 'Cartesian' heritage

Descartes [1596–1650] is usually attributed with bringing the notion of our having "ideas" within us as being central to our knowing anything, as being the basic unit of knowledge-what I will call his way of ideas. In a letter to Guillaume Gibieuf (1583-1650), dated 19 January 1642, he wrote: "I am certain that I can have no knowledge of what is outside me except by means of the ideas I have within me." Indeed, Descartes (1968), in his Fifth Meditation, goes further: "... before considering whether such things exist outside myself, I must examine the idea I have of them in so far as they are to be found in my thought and see which of them are distinct and which confused" (p. 142, my itals). Or, in his Discourse on Method of 1637, he remarked on the seemingly undeniable reality of mathematical objects, for example: "I very well perceived that, supposing a triangle to be given, its three angles must be equal to two right angles, but I saw nothing, for all that, which assured me that any such triangle existed in the world; whereas, reverting to the examination of the idea I had of a perfect Being, I found that existence was comprised in the idea in the same way that the equality of the three angles of a triangle to two right angles is comprised in the idea of a triangle or, as in the idea of a sphere, the fact that all its parts are equidistant from its center" (p. 57). Or, to go further: "... because he is a perfect Being, and because everything that is in us comes from him... it follows that our ideas and notions,... in so far as they are dear and distinct, cannot to this extent be other than true" (p. 58).

Thus it is that in his Discourse on Method, he suggested that: "These long chains of reasoning, quite simple and easy, which geometers use to teach their most difficult demonstrations, had given me cause to imagine everything



which can be encompassed by man's knowledge to be linked in the same way... [thus] there can be nothing so distant that one does not reach it eventually, or so hidden that one cannot discover it" (Descartes 1968, p. 41). And this is that we now seem to assume that 'thinking' involves something like 'calculating' (figuring out) or more recently 'information processing', that is, as something that can be done by following fixed rules as in arriving at 'theorems' from 'axioms' in geometry.

But, as is clear from Descartes comments about the properties of triangles and spheres, such assumptions are couched in terms of perfections and ideals which as Descartes himself admits, he has seen "nothing... which assured me that any such [ideal] triangle existed in the world."

Yet, because also we remain in thrall to the claim that the only proper knowledge we can ever have about ourselves and the world in which we live is knowledge arrived at by the exercise of scientific methods of inquiry, we also remain in thrall to his way of ideas as the starting point for our inquiries. Indeed, as soon as we begin to reflect, to try to think about ourselves and our worlds, to try to make sense of what seems to be happening within them, we inevitably think in terms of 'things' we can talk about to others, 'things' we can 'picture', 'things' that already make one kind of sense to us that we feel must have some hidden properties that we can discover that will reveal to us why they act as they do.

But in thinking like this, we are taking for granted that the thinking that we as adult thinkers do deliberately and know of ourselves as doing is simply what thinking is. Whereas, in fact, it is drawn from, and is an aspect of, the thinking that just happens within us as a result of our having grown up within a particular language group, with its own particular cultural history, and it is this kind of justhappening-'background'-socially shared-thinking that goes on within us-seemingly, both out of our awareness and out of our own self-control-that 'sets the scene' for how we make sense of events occurring to us within our surroundings. Commenting on his own difficulty of trying to come to a grasp of its nature, Wittgenstein (1953) remarked: "A picture held us captive. And we could not get outside it, for it lay in our language and language seemed to repeat it to us inexorably" (no.115).

Indeed, as Taylor (1995) puts it, there is "a temptation here to a kind of self-possessing clarity, to which our culture has been almost endlessly susceptible. So much so that most of the enemies of Descartes, who think they are overcoming his standpoint, are still giving primacy of place to epistemology... (T)hey are still practicing the structural idealism of the epistemological age, defining their ontology, their view of what is, on the basis of a prior doctrine of what we can know" (p. viii)—for as he points out, all the

objectors to Descartes way of ideas still see knowledge as the "correct representation of an independent reality... as the inner depiction of an outer reality" (pp. 2–3). And as he goes on to note: "we can't turn the background against which we think into an object for us" (p. 12)—for, as I have commented above, we cannot get to the bottom of what counts as knowledge for us without drawing on our neverfully-articulable understanding of human experience and the part it plays in our human lives at large.

So although as a thought style (Fleck 1979), Cartesian-ism exerts a coercive or compulsive force upon our thinking, to get beyond it we must. And as we shall see, this is what becoming *dialogical* can do for us, for it requires us to move out of a mechanical world of (geometric) 'things'—consisting in 'objects' in motion characterized in terms of shapes and forms—and into a world of meanings experienced by us only in the course of our step-by-step unfolding, living relations to the others around us. For our every-day activities only happen as they do, in the back-and-forth dynamics of those we address in our expressions, responding back to us in the course of our acting in ways communicating to us their understanding of us.

1.2 Rethinking the I-You relation in robotics as a dialogical relation

"The secret of the world we are seeking must necessarily be contained in my contact with it. Inasmuch as I live it, I possess the meaning of everything I live, otherwise I would not live it; and I can seek no light concerning the world except by consulting, by making explicit, my frequenting of the world, by comprehending it from within" (Merleau-Ponty 1968, p. 32, my itals).

Thus, placing our faith in Descartes claim, we feel that by our (geometry-like) deductive reasoning—if we can 'lay out before ourselves', so to speak, mechanical models of such *things* which will, in their working, produce outcomes similar to human achievements—then we will have fully "understood" the *thing* in question. Indeed, over the last fifty years or so, academic psychology has undergone what many take to be a profound and exciting revolution, variously termed as "the mind's new science" (Gardner 1987), "a major shift in metatheory" (Baars 1986), or simply as "the cognitive revolution" (Gardner 1987; Baars 1986).

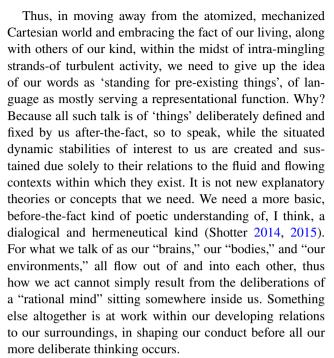
While Americans see its beginnings in Miller et al. (1960) and Neisser (1976), those in Britain see it as beginning much earlier with Kenneth Craik's (1943) book, *The Nature of Explanation*. "If the organism carries a 'small-scale model' of external reality and of its own possible actions within its head," Craik suggested, "it is able to try out various alternatives, conclude which is the best of them,... and in every way to react in a much fuller, safer, and more competent manner to the emergencies which face



it" (p. 61). Where Craik had already noted that, "the model need not resemble the real object pictorially; Kelvin's tide-predictor, which consists of pulleys on levers, does not resemble a tide in appearance, but it works in the same way in certain essential respects... so as to produce an oscillation which closely resembles in amplitude at each moment the variation in tide level at any place" (pp. 51–52). What matters is that the model possesses "a similar relation-structure to that of the process it imitates" (p. 51), and can thus produce corresponding outcomes in corresponding circumstances.

Craik's early views, clearly, are similar to those shaping current approaches in robitics: where the aim is to design self-organizing machines to take the place of humans in dangerous environments or manufacturing processes, or to resemble humans in appearance, behavior, and/or cognition, where it is already clear as to what it is that they are required to achieve. However, what is now becoming clear to us, as a result of Wittgenstein's (1953, 1969, 1980) and work in the philosophy of language, and Merleau-Ponty's (1962) work in phenomenology, along with Bakhtin's (1981, (1984, 1986) and Voloshinov's (1986) work on the dialogical nature of our forms of human expression, is that although we talk of understandings as coming into existence as a result of our 'thoughts', 'ideas', or 'knowledge', i.e., as a nameable causal process, the fact is, such processes can only be seen as having been at work in people's performances after-the-fact of their completion, as a result of our exerting, as members of a linguistic community, a judgment as to what it was we were witnessing. As Wittgenstein (1953) notes: "If language is to be a means of communication there must be agreement not only in definitions but also (queer as this may sound) in judgments. This seems to abolish logic, but does not do so (no.242, my itals). For, as Winch (1958) points out: "Learning to infer is not just a matter of being taught about explicit logical relations between propositions; it is learning to do something" (p. 57)—logic is a human activity that finds its justification within all the rest of our human lives together.

So although in the past it has seemed quite natural to think of specific, nameable mental 'things' within us shaping our behavior out in the world at large, things are now beginning to change, and to change quite rapidly too. We can no longer believe in the ancient Greek idea of our realities as consisting in perfections or ideal forms hidden from us behind appearances; for clearly, we now find ourselves—as spontaneously responsive, dialogical beings, living in intimate relations with our surroundings—immersed within an oceanic world of ceaseless, intra-mingling currents of activity which influence us as much, if not more, than we can influence them. Indeed, not only have our social worlds become much more turbulent and extreme, so also in recent times have our physical worlds.



What we have neglected (among many other things) is our spontaneously responsive, embodied nature—the fact that we have feelings, and that our feelings play a major part in shaping our behavior out in the world at large. In the past, of course, such talk of feelings has been thought of as being utterly unscientific, as clearly lacking in objectivity that is, as not only failing to be 'true' to 'reality' but also as lacking in public shareablity. Thus, investigations into such experiences have been dismissed as merely idiosyncratic and introspective, as leading to focus on events that, in Cartesian terms, we would quite unsuitably call, 'merely subjective'. But, such remarks, clearly, are misplaced once we turn our attention to our dialogical capabilities. We only have to attend to what we all in one sense of 'know' in simply being a speaker/listener of our native language, to appreciate that such a form of embodied knowing can be, for almost all practical purposes, something shared among a whole great group of other people. Indeed, the fact that we can all perceive meanings in the stream of a noises issuing from the mouths of our fellows is nothing short of amazing.

Indeed, about that stream, as William James (1890) remarked: "The truth is that large tracts of human speech are nothing but signs of direction in thought, of which direction we nevertheless have an acutely discriminative sense, though no definite sensorial image plays any part in it whatsoever... Their function is to lead from one set of images to another... Now what I contend for, and accumulate examples to show, is that 'tendencies' are not only descriptions from without, but that they are among the objects of the stream, which is thus aware of them from within, and must be described as in very large measure



constituted of feelings of tendency, often so vague that we are unable to name them at all" (pp. 253–254). It is our sharing in those feelings of tendency, of which we have an acutely discriminative sense, that allows us all (mostly) to be able to coordinate of our own unique individual utterances and actions in with those of the others around us.

Evidently, then, there are two ways in which we can use our words: (1) One is in an after-the-fact representational fashion, as stating a claim about the factual nature of the hidden reality thought to be responsible for observed events, i.e., "as a preconceived idea to which reality must correspond" (Wittgenstein 1953, no.131).

But (2) another way, however, is to use our words in a dialogical fashion, responsively (and responsibly); for a speaker's sequence of words can, in their speaking, bodily 'move us', i.e., give rise to movements of feeling within us, and in so doing, work within us as a before-the-fact aid to our perception to direct our attention, not only to this aspect of what is happening in our current circumstances rather than that, but also to arouse particular feelings of anticipation (tendency) within us as to what, possibly, might happen next. Indeed, central to the whole dialogical approach to language use, as outlined by Bakhtin (1981), is the claim that: "The word in living conversation is directly, blatantly, oriented toward a future answer-word... Forming itself in an atmosphere of the already spoken, the word is at the same time determined by that which has not yet been said but which is needed and in fact anticipated by the answering word. Such is the situation of any living dialogue" (p. 280, my emphasis).

But even more than this, as Bakhtin (1986) also makes clear: "An utterance is never just a reflection or an expression of something already existing and outside it that is given and final. It always creates something that never existed before, something absolutely new and unrepeatable.... [The] something created is always created out of something given (language, an observed phenomenon of reality, an experienced feeling, the speaking subject himself, something finalized in his world view, and so forth). What is given is completely transformed in what is created" (pp. 119–120)—and what is created belongs to all the participants within the dialog. We are not within a unique social circumstance in which we need to act in a way which is not simply a repeat of a previous action.

Crucial to this, is not merely satisfying our wants and desires, or deliberately formulated plans, but coming to a grasp of our situated needs (Todes 2001) and our seeking to satisfy those. Our bodily needs can thus structure our whole experience, so that each detail of our circumstances can be seen as relevant or irrelevant to our bodily felt needs. Crucial to our being able to do this, as Dreyfus (1967) makes clear in his early paper "Why computers must have bodies to be intelligent," is that: "When we first experience a need

we do not at first know what it is that we need. We must search to discover what allays our restlessness or discomfort..." (p. 25). What is remarkable in this process is that, although the restlessness or discomfort we feel is at first vague and unformulated, it is a specific vagueness, to do with our situation, i.e., how we are placed in relation to the others and otherness around us. Dewey (1938/2008) puts it thus: "the peculiar quality of what pervades the given materials, constituting them a situation, is not just uncertainty at large; it is a unique doubtfulness which makes that situation to be just and only the situation it is" (p. 109, my itals), and because of this, such a bodily felt need can function as a very precise 'guide' or 'compass' in directing our explorations as we search in the situation for its satisfaction.

This is where the hermeneutical aspect of our dialogically-structured activities becomes relevant. For in picking up a fragment of experience here and, another, there, we come to build up within ourselves a particular meaningful whole, a global sense of the particular situation we are currently occupying or a subject of concern to us. Gadamer (2000) puts it thus: "We accept the fact that the subject presents different aspects of itself at different times or from different standpoints. We accept the fact that these aspects do not simply cancel one another out as research proceeds, but are like mutually exclusive conditions that exist by themselves and combine only in us" (p. 284, my itals). Our ability to do this, to form such unique global wholes, seems to be a very basic human capacity in our meaningfully relating ourselves to our surroundings. It is this challenge that those in robotics now need to meet.

2 Conclusions—we are 'of' the world, not just 'in' it

"The openness upon the world implies that the world be and remain a horizon, not because my vision would push the world back beyond itself, but because somehow he who sees is of it and is in it" (Merleau-Ponty, 1968, p. 100, my itals).

We didn't make the world, the world made us; just as much as the other animals and plants, as living beings, we are also participant parts within the world's coming-intobeing. And in a world in which every 'thing' is always in movement—in both senses of the word, i.e., as always moving along within a larger movement, as well as moving within itself—we find ourselves buffeted by the wind and waves of the social 'weather' around us, 'movements' affect us as much, if not more, that we can affect them. Thus, we—you and I—cannot be external observers of the world; we cannot *get outside* of it; we must always work *from within* it. In other words, our task is to seek to understand what we experience and perceive only in terms of



what we experience and perceive, to understand it in terms of itself, rather than in terms of another, external, eternal, ideal but hidden (mathematical) world of, in fact, our own creation; that is we must talk from within our lives, rather than from an illusory place outside them.

Thus, in moving away from the atomized, mechanized Cartesian, ideal world and embracing the fact of our living, along with others of our kind, within the midst of intramingling strands-of turbulent activity, we need to give up the idea of our words as 'standing for pre-existing things', of language as primarily serving a representational function. So, although in our everyday talk, we continuously talk of such mental 'things' as 'thoughts', ideas', 'decisions', of 'judgements', and 'knowledge', we use such words in our social lives with discernment and judgement, in ways appropriate to the circumstances of their use. Thinking that there must be such 'things' already at work in us for us to be able to use such words is, to repeat, to ignore all the other circumstantial and situated influences at work upon us, in our acting in ways sensitive to the social, ethical, and political relationalities that matter to us in all our everyday activities.

Lanchester (2015), in his recent article on advances in robotics picks up on this issue; referencing material from Frey's and Osborne's (2013) study, he remarks: "The theme is clear: human-to-human interaction and judgment is in demand, routine tasks are not" (p. 7). This need has not gone unrecognized in the world of robotics. For instance, Froese (2011) argues that new life can be breathed into cognitive science if we accept that "mind can indeed be conceived as rooted in life, but only if we accept at the same time that social interaction plays a constitutive role for our cognitive capacities" (p. 113). Harris and Sharlin (2011), in their concern with Human-Robot Interaction (HRI) are exploring what they call "emotive motion," on the basis of the fact that "things that are moving, changing, and reacting are seen as somehow 'alive' whether they are biological creatures or not." While Ziemke and Sharkey (2001) want to explore "the relevance and implications of Jakob von Uexkull's theory of meaning to the study of artificial organisms and their use of representation and sign processes" (p. 701).

I have emphasized the hermeneutical—dialogical nature of our relations to the others and otherness around us because, as I see it, due to their nature, all these efforts at 'humanizing' robotic activities will need to satisfy at least the following criteria: As Bakhtin points out, our expressive activities are not, and cannot be achieved by mere pattern matching processes, because: (1) they are future oriented, in that they are both in response to, and aimed at arousing, situated anticipations, whose function is to enable individual people to coordinate their actions in achieving socially shared outcomes; (2) they are also creative, in that they can

give rise to unpredictable outcomes, appropriate to the situations within which they occur; and further, (3) people's expressive activities have a 'promissory' quality to them, in the sense that others can hold us responsible in the future for outcomes implied in our expressions in the past. Indeed, what is at issue here is not the value of a product or outcome, but the value of its situated coming into being. For even if one outcome is perfectly identical in every detectible respect to another, the value of the first can, socially, be quite different to the value of the second. For it is only in its coming into being as the unique 'thing', it does play a unique role in our social interactions with each other.

As Bakhtin (1993) puts it, its value is in the fact of its situated "answerability," the fact that each of us is responsible for what we say within the situations of our speech. None of these criteria can be met merely by modeling or by pattern matching, no matter how dynamic, for it needs to be emphasized that they all rely on invisible, movements of feeling, with their own, distinctive, temporally unfolding trajectories. In taking advantage of the already existing value of an imitated product or outcome, if it fails to honor the social commitments implied in its use, we would call such a product counterfeit.

For we feel that we would not be so naive, we may talk about the 'id' and the 'ego' and the 'unconscious', but we are talking about *real* things, or at least hypothetical things which have a great deal of evidence in their support. But I think we are being naive—or at least in the past, we have been. And by having not been properly aware of the power of language, of the power of story-telling to 'lend' a sense of reality to wholly fictitious worlds, we have allowed ourselves to have been talked into accepting a counterfeit version of our social lives together.

Currently, as I see it, our official rationality is still of a Cartesian kind; we are still embedded in an economic discourse that takes it that separate, countable entities are the only 'things' that matter to us, that can be accounted as of value to us. The invisible, relational nature of the hermeneutical-dialogical 'things', the 'promissory' things sustaining our trust in each other, and in our authorities, sustaining our social organizations, our social institutions, and our culture, can all in a perfectly rationally justified manner, be gradually excluded by current developments in robotics. Clearly, we need to understand better, not only what robots can, and cannot do, but also the long-term ethical and political implications of inserting robotic activities into our everyday ways of relating ourselves to our surroundings, if we are to avoid "the dystopian future of capitalismplus-robots," Lanchester (2015) foresees. For simple, often seemingly 'burdensome' chores, like washing up or gardening together, can create social familiarities and solidarities that are all too easily passed by unheeded. Descartes (1968) aims of "making ourselves, as it were, masters and



possessors of nature" (p. 78), forgets our larger task of our making (and sustaining) ourselves as human beings—as doing together, in dialog with each other, what we cannot do alone.

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