

UNDERSTANDING: THE NATURE OF NURTURE – PART 2

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That we learn from others is less a scintillating or profound idea than a common-place acknowledgement of the human condition. Yet it is not uncommon to find this self-evident truth attributed to Vygotsky as if it were a major discovery that had long eluded centuries of thought and reflection about human nature. Outside the halls of arcane academic discourse, few would claim that we actually name ourselves, invent our own languages that miraculously are understood by others, devise our own belief systems and construct all the tools of our various trades, and all this all by our singular selves. Leaving aside potted versions of Vygotsky that reflect the most superficial interpretations of his subtle and intriguing theories and ideas, if originality is at issue then it is surely Piaget who must take the honours for providing a counter-intuitive account of human learning. Piaget's insight was that despite the obvious and necessary fact of social or cultural learning and the role of others in the child's development, cultural and social factors are not sufficient to explain learning. This distinction between the necessary and the sufficient finds expression in Piaget's use of the terms *learning* and *development* to indicate the difference. Piaget's theory that relies on a method designed to eliminate or minimize cultural and social factors, is intended not only to provide an account of the sufficient conditions that underpin cognitive development but also to plug the theoretical hole that any account based on the primacy of social learning must confront. This is the infinite regress of the teacher's teacher or the other's other. The problem is not only theoretical in the formal or logical sense but presents a problem for evolutionary psychology where human culture and language cannot be relegated to a given whose genesis does not require any explanation¹.

Unlike many of his latter-day disciples, Vygotsky did not ignore Piaget's work and neither did he reject it out of hand. In his seminal chapter on *The development of scientific concepts*, Vygotsky vigorously engages with Piaget's ideas and a close reading of this text suggests that he is not attempting to dismiss Piaget but to integrate his own approach with that of Piaget and thereby to construct a more complete theory of cognitive development. It is difficult to reconcile a Vygotskian paradigm that is construed as emblematic of the primacy of the social in the formation of mind with the following passage written by Vygotsky as a *critique of Piaget*.

¹ Plotkin (2002) argues that an evolutionary approach to psychology provides the necessary bridge between nature and nurture.

"Further, scientific concepts can arise in the child's head only on the foundation provided by the lower and more elementary forms of generalization which previously exist. They cannot simply be introduced into the child's consciousness from the outside" (1987:177).

Attempts to depict Vygotsky as the arch social constructionist of Psychology are not only misleading but serve to distort Vygotsky's novel and distinctive contributions. A good example is provided by Harré (1998:27) who contends that Vygotsky's developmental psychology rests on two principles, as follows:

"1. For each individual person thought and language have independent origins. Thought begins in the native activity of the nervous system, while language begins in social interaction.

2. The structure of the developed human mind comes about through the acquisition of skills in psychological symbiosis with others."

Exactly where Harré derives these two half-baked principles from is not clear but what is clear is that far from advocating the primacy of one line of development over the other, or of the social over the biological, the overriding principle formulated by Vygotsky is that in the course of development, thought and language, or more generally, the natural and the social converge and in the process transform each other to yield what he called the higher mental processes². It is this moment of mutual transformation that represents Vygotsky's novel contribution rather than any crude interpretations that would strip his theories of their originality and leave him exposed as a social-learning theorist.

The strong point that Vygotsky makes is that what we learn from others or in its more paradigmatic form, what children learn from adults is of a different order and not merely equivalent to what we spontaneously learn on our own. The difference between the everyday concepts that the child acquires largely without adult help and the scientific concepts that are explicitly taught to the child by informed others such as teachers is that the latter form part of an organized system or inter-related set of concepts such that the child's spontaneous understanding is enriched and transformed by the encounter with the system as a whole.

"The developmental paths taken by the child's spontaneous and scientific concepts can be schematically represented as two lines moving in opposite directions. One moves from above to below while the other rises from below to above. If we designate the earlier developing, simpler, and more elementary characteristics as lower and the later developing, more complex characteristics (those connected with conscious awareness and volition) as higher, we can say that *the child's spontaneous concepts develop from below to above, from the more elementary and lower characteristics to the higher, while his scientific concepts develop from above to below, from the more complex and higher characteristics to the more elementary*" (1987:219, italics in the original text).

² Acknowledging that we are both symbolic and somatic animals, Eagleton (2000:98) comments that "We are not so much splendid syntheses of nature and culture, materiality and meaning, as amphibious animals caught on the hop between angels and beast."

This process where opposite developmental trajectories meet is encapsulated in Vygotsky's idea of a *zone of proximal development*. In his introduction to the English edition of Vygotsky's collected works, Bruner describes this as a "stunning concept"³ (1987:4). But, as with so many of Vygotsky's stunning ideas, the concept of a *zone of proximal development* or, as initially introduced by Vygotsky, a *zone of proximal possibilities* (1987:169) has been misrepresented and debased to mean something more at home and at ease with Anglo-American discourses about learning⁴. There have been two main attempts to explicate the *zone of proximal development* and both are antithetical to the spirit if not the letter of Vygotsky's way of thinking about learning and development. Having informed us that the *zone of proximal development* is a stunning concept, Bruner continues and introduces the *scaffold* interpretation of this concept, an interpretation that is stunningly at odds with theme of the text in which the concept is embedded. The scaffold metaphor refers to a situation in which an adult or teacher guides the learner through the incremental learning of a sequence of subtasks (Wood, Bruner, & Ross, 1976; Rogoff, Malkin, Gilbride, 1984; Saxe, Gearhart, Guberman, 1984). This common-sense instructional technique is well suited to the learning of practical tasks such as riding a bicycle and the like and is fully compliant with the old behaviourist principles that seem to lurk just beneath the surface and that were anathema to Vygotsky. Harré leaves little room for doubting the adequacy his interpretation of the *zone of proximal development* given his blatant misrepresentation or misunderstanding or, perhaps, misreading of Vygotsky's texts. "According to Vygotsky, the main developmental moment is when a child has been trying to do something, and the task is completed by an adult supplying the missing step. At this point the cognitive or manipulative capacity is in the 'zone of proximal development'" (1998:29).

Vygotsky makes the point that animals can only learn from imitation what they could also learn by themselves and one can hazard the guess that he would probably have said much the same about children learning from *scaffolding* that may perhaps hasten the learning process and of course save the child from the perils of trial and error. But it is difficult to see how a child would learn any of the Piagetian tasks such as conservation or classification by an adult supplying the missing step.

The other attempt to explicate the *zone of proximal development* involves an assimilation of the concept into the theoretical framework of dialogue, a framework that has tenuous points of overlap with the actual situation captured by the concept of a *zone of proximal development*. The main proponent of this approach is Wertsch (1984) and he introduces three theoretical constructs by way of explication: situation definition, intersubjectivity, and semiotic mediation. These three constructs are nested in the sense that effective learning based on instruction requires that the teacher and learner share a common definition of the situation such that they are engaged in doing the

³ Plotkin is no less effusive in his praise referring to the *zone of proximal development* as "an exquisite conceptual creation" (2002:273).

⁴ Van der Veer and Valsiner (1993:347) comment that Vygotsky did not regard the concept of a zone of proximal development as his own original contribution. He referred to "American investigators" among others as the originators of the concept and there is some irony in the "American" re-discovery of the concept in Vygotsky's writings. Van der Veer and Valsiner also point out that Vygotsky was influenced by Baldwin an intellectual source that he shared with Piaget.

same task. This, in turn, implies intersubjectivity between the teacher and learner but, as Wertsch points out, intersubjectivity is the goal of instruction and cannot be its means. The solution he proposes is that the teacher and learner "negotiate" their relative situation definitions and this requires a "concrete mechanism," the third theoretical construct of semiotic mediation. By this term, Wertsch seems to mean verbal communications that consist of the teacher directing the learner to act in various ways and thereby to establish intersubjectivity. "It can be an invitation to the child to redefine the situation on the adult's terms. By representing objects and events in speech in a certain way, the adult can be attempting to negotiate a new level of intersubjectivity" (1984:15). But the problem is that semiotic mediation or meaningful communication requires that the teacher and learner communicate on the basis of shared meanings in the absence of which the communication breaks down. For semiotic mediation to be effective, in the sense that the learner changes her understanding of the situation, or in Wertsch's terms, redefines the situation, something very different from "negotiation" must occur. As Wertsch points out, the negotiation process that underpins the establishment of intersubjectivity involves an "important asymmetry." The teacher, unlike the learner, is not required to change her definition of the situation and, on the contrary, it is this definition that the child must adopt for successful learning to occur. In this sense, the situation definition is strictly non-negotiable⁵. As Wertsch comments, "The only genuine lasting situation redefinition that takes place occurs on the part of the child" (1984:13). Wertsch's theoretical constructs serve to explicate the problem rather than provide a solution. But he does provide a partial answer yet does not seem to appreciate its significance and the fact that it radically undermines his three-fold explication as well as the "scaffolding" interpretation of the zone of proximal development.

"Finally, we have seen that we cannot account for growth in the zone of proximal development solely in terms of quantitative increments to an existing situation definition. Rather we must recognize that a fundamental characteristic of such growth is what one might term *situation redefinition* – something that involves giving up a previous situation definition in favor of a qualitatively new one" (1984:11).

It is instructive to consider Piaget's conservation tasks in terms of Wertsch's theoretical construct of situation definition. The difference between the non-conserving child and the conserving child (or adult) is that they understand (or define) the task situation in different ways. The compelling feature of conservation tasks is that nothing in the external situation changes. In the case of the conservation of quantity task, in which a liquid from one of two identical containers is poured into a different shaped container (and hence yields a different level of the liquid in the new container), the initial situation of equal amounts of water in identical containers, the pouring of the liquid into a differently shaped container, and the resulting change in the level of the liquid, are the

⁵ Embedded in the discourse of negotiation is a process of give and take, if not between equals then at least between partners who each have something to give and something to take. Attempts to ground the *zone of proximal development* in a process of negotiation profoundly miss the point however unpalatable this may be to theories and practices of education that would place the learner and teacher on an equal footing. The point is that the *zone of proximal development* suggests a variation on the theme of the classical Master-Slave relation in which the achievement of understanding and enlightenment requires, as a necessary moment, submission to the mastery of the *Other*. To surrender the *self* is the ultimate state of bondage.

same for non-conserving and conserving children alike. But the situation is understood differently. The non-conserver bases the judgment of quantity on the level of the liquid and disregards the other dimensions of the container. Judgment of "more" and "less" are based on perceptually salient features and as a rule of thumb this understanding is probably adequate for most situations. Elephants appear to take up more space than mice and indeed they do. The point, then, is that it is the situation definition or understanding of the task that prevents the non-conserver from conserving. The more the non-conserver applies this understanding in different contexts and practices the necessary perceptual skills, the more entrenched this understanding becomes and the situation definition is confidently expressed by the non-conserver without any hesitation or doubt. The shift in understanding from non-conservation to conservation cannot occur in sequenced steps and the vacillations reported from children in a transitional stage do not represent incremental steps towards mastery of the task. Rather, they reflect the undoing of the task definition or unravelling of the way in which the situation is understood. The new understanding of conservation requires a negation of the old, a giving up of previous understanding and a redefinition of the situation.

Given that the Piagetian paradigm explicitly excludes collaboration with adults or more knowledgeable peers, it is instructive that Wertsch (1984:11) arrives at a similar conclusion regarding the *zone of proximal development*.

"I would argue that this process of giving up an existing situation definition in favor of a qualitatively new one is characteristic of the major changes that a child undergoes in the zone of proximal development. Rather than thinking of change in this zone as a steady accretion of knowledge about a task, it is essential to understand that major portions of this change occur through a shift in one's basic understanding of what the objects and events in a setting are. It is perhaps best to think of such change in terms of the sudden insight experience examined by Gestalt psychologists, such as Duncker (1945)."

To conceptualize the *zone of proximal development* as a zone of insight learning significantly alters the meaning of collaboration between learner and teacher that is the defining feature of the zone of proximal development, certainly as it is understood in terms of a scaffolding interpretation of the zone of proximal development and also as a zone of intersubjectivity or what Bruner (1984:94) refers to as a "form of mental sharing." It has long been recognized that the *zone of proximal development*, as formulated by Vygotsky, only provides a general framework or proto-construct that requires considerable elaboration. Wertsch (1984:8) is certainly correct in claiming that in the absence of any elaboration by Vygotsky, it is necessary to explicate the *zone of proximal development* by introducing theoretical concepts that would explain the "mechanics" involved in the kind of mediation or *mediated learning*⁶ that occurs between learner and teacher and transforms the unknown into the known. Without any explicit guidelines, it seems sensible to draw on themes that permeate Vygotsky's work such as the part played by history and culture in the formation and shaping of mind and the idea that psychological explanation should provide a generative or formative account of the processes that constitute the distinctly human higher mental functions.

⁶ Feuerstein (1980) used the theoretical construct of mediated learning experience to develop his intervention programme of cognitive modifiability.

All forms of mediation⁷, or instruction, or *other-regulation*, consist of doings that are experienced as happenings. The recipient of mediation or mediatee is the *self* that experiences mediation as something that is done or happens to it. Although all mediation is an attempt to regulate the experience of the *self*, its awareness and consciousness, we can distinguish, at least analytically, between a direct and intrusive form of regulation and an indirect more covert form of regulation. All kinds of overt instruction fall into the former category whereas forms of life or being - culture, tradition, history - fall into the latter category. This categorization is not to suggest that these forms of mediation are independent or unrelated. On the contrary, all direct instruction is informed by the nature of our being and is itself an expression of a particular way of being⁸.

Following a set of instructions or acting in a particular way produces some state of affairs that is experienced by the *self*, of which the *self* is aware and about which the *self* is conscious. What the awareness produced in this way is about, in contrast to what it is of, its content, is nothing other than the actions performed in bringing about the awareness. For example, if I instruct a child to use a pair of scissors, the aboutness of scissors, its cutting function, is revealed in the actions the child performs; actions that the instructor regulates as part of the instruction process. All regulation consists of directives to act in particular ways but the actions produced by the mediatee, as a consequence of other-regulation, have their origin in the understanding that constitutes the *self* of the *other* as mediator. In the sense of *other-regulation*, mediation involves the interception of the *self* of the mediatee, that is the prior or pre-understandings that constitute the consciousness of the mediatee, and the substituting of the *self* of the mediator. The effect of mediation, then, is to reduce an agent to an actor whose actions are now experienced as happenings by the *self*.

The importance of the concept of pre- or fore-understanding is often overlooked or misplaced in theories of learning and teaching where the conventional wisdom is that teaching should always proceed from the known or familiar and move towards the unfamiliar. But as Ortega points out, the sheer familiarity of our understanding can blind us to what it is that we know.

"These instances of blindness vary from one period to another but they are never absent. ... Every idea is thought, every picture painted, out of certain assumptions or conventions which are so basic, so firmly fixed for the one who thought the idea or who painted the picture that he neither pays heed to them, nor, for that matter, introduces them into his picture or his idea; nor do we find them there in any guise except as *pre-supposed* and left, as it were, at one side. This is why we sometimes fail to understand an idea or a picture; we lack the clue to the enigma, the key to the secret convention" (1960:49).

⁷ The term *mediation* in a Vygotskian context refers to learning and teaching as a composite process. Commenting on the different views of culture reflected in the anthropological literature, Plotkin concludes that "one must cling to that core quality as defining a specific phenomenon: learning from others what they in turn have learned" (2003:102).

⁸ For a splendid analysis see Archer's (2000) *Being Human*.

Corresponding to Ortega's condition of "blindness" is the concept of "tradition" that informs Gadamer's analysis (or interpretation of Heidegger's analysis) of the role of fore-understanding in the hermeneutic circle.

"The circle, then, is not formal in nature, it is neither subjective nor objective, but describes understanding as the interplay of the movement of tradition and the movement of the interpreter. The anticipation of meaning that governs our understanding of a text is not an act of subjectivity, but proceeds from the communality that binds us to the tradition. But this is contained in our relation to tradition, in the constant process of education. Tradition is not simply a precondition into which we come, but we produce it ourselves, inasmuch as we understand, participate in the evolution of tradition and hence further determine it ourselves. Thus the circle of understanding is not a 'methodological' circle, but describes an ontological structural element in understanding" (1975:261).

The idea that understanding is not simply an adjunct or product of our cognitive equipment that can be acquired or refined but is an essential aspect of our being, lies behind Ricoeur's attempt to use discourse as bridge between text and meaningful action and to argue that insights from hermeneutics can legitimately be applied to the human sciences (1983:197-221).

We can distinguish between the actions of an agent and those of an actor. In the former case, actions have their origin in the *self*-understanding of the agent. In the case of an actor, however, actions lack an inner or anterior dimension of *self*-understanding. To play out a role, whether in the theatre or in life, is to disengage the *self* from involvement in the activity that is produced by the actor. The distinguishing feature of action as a role that is enacted by an actor is the eclipse of the *self*. In the theatre, an actor must suspend the real *self* and substitute the *self* of the character that is portrayed. By penetrating into the life of the stage character, a convincing or moving performance is achieved. In real life, social roles that govern much of our daily intercourse are also characterized by a suppression or suspension of the *self*. Social or cultural conventions are often enacted non-consciously, in the sense of "going through the motions". It is as if the *self* is suspended in many activities that constitute routine actions in the course of social life. Again, both Ortega and Gadamer capture this hidden or silent dimension that informs our actions.

"Now, what acts in us through acquired habit we do not especially notice, we have no particular, present consciousness of it, just because it is habit. In addition to the pair of notions present and compresent we must also distinguish another pair: what exists for us now in a definite, deliberate act; and what exists for us habitually, is constantly in existence for us, but in this veiled, unapparent, and as it were, dormant form of habituality. ... The present exists for us in actuality; the compresent in habituality" (Ortega, 1957:65).

"Long before we understand ourselves through the process of self-examination, we understand ourselves in a self-evident way in the family, society and state in which we live. The focus of subjectivity is a distorting mirror. The self-awareness of the individual is only a flickering in the closed circuits of historical life. That is why the prejudices of the

individual, far more than his judgments, constitute the historical reality of his being" (Gadamer, 1975:245).

The contrasts between Ortega's actuality and habituality, and Gadamer's prejudice and judgment are illuminated in situations in which cultural or social conventions are made explicit, as in the case of the legal system, or any other overtly rule governed activity. In these situations, the suppression of the *self* is an indispensable requirement. Judges and lawyers must put aside their personal views and feelings and act within the boundaries of the rules prescribed by the body of the law and many courtroom dramas reflect a tension between the dogma of law that must ultimately prevail and the cause of justice that in the process may be sacrificed. In the world of the court, agency is strictly controlled and severely limited, and the actions of all the participants are constrained and regulated by the roles each is called on to enact. What is put aside is the *self* and what is left in place is an actor who performs a role, a player who plays a part. To act impartially is not to act without a part but to play a part such that one's actions are detached from the *self* and attached to a surrogate *self* from which understanding derives. In these situations, we can observe our actions because we do not express ourselves.

By directing others to act in a particular way, we direct them to act as we do in order to experience something we experience or in order to place themselves where we are placed when we understand. Referring to hermeneutic theory, Gadamer comments that "Understanding is not to be thought of so much as an action of one's subjectivity, but as the placing of oneself within a process of tradition, in which past and present are constantly fused" (1975:258). Similarly, in understanding a text, "we do not try to recapture the author's attitude of mind but, if this is the terminology we are to use, we try to recapture the perspective within which he has formed his views" (1975:259). Unlike the stage actor who dies tragically at the end of a play but does not experience death, in the theatre of life, actions that are mediated by an *other*, a consciousness that is alien to the actor, produce a new experience; an awareness of a new situation accompanied by a consciousness that grasps the aboutness of the situation through the actions of which the new situation is the product. As a form of explanation, mediation transforms pre-understanding by negating through action what is; the awareness and consciousness that constitutes the *self* of the mediatee. As the product of the work of mediation, understanding can only be self-understanding. The transformation of understanding that mediation achieves is a transformation of consciousness that is revealed in new ways of acting and experiencing the world. Because experience is open, in the sense that it is a happening, something that is done to us and not necessarily something we do, understanding is always a kind of potential not-understanding, or as Ortega comments: "Man 'goes on being' and 'unbeing' - living. He goes on accumulating being - the past; he goes on making for himself a being through his dialectical series of experiments. This is a dialectic not of logical but precisely of historical reason" (1941: 215).

Today's understanding is tomorrow's lack of understanding because what we experience now may not be replicated. Understanding is the volatile aspect of knowing whereas *Reason*, constituted by actions that can be and are replicated, lends stability, in the form of logical reasoning, to knowing.

The transformation of understanding that mediation achieves is a transformation of consciousness that is revealed in new ways of acting and experiencing the world. Mediation, in which actions serve to regulate the awareness and consciousness of the *self*, implies an *other* as the source of action. In the case of direct instruction by a parent or teacher, it is clear that vis-a-vis the child or learner, mediation consists of *other*-regulation, that is regulation by an *other* who is also the source from whom actions derive. The *other*, however, is not merely an actor who produces actions but an agent whose awareness consists of the presence of the mediating situation but whose consciousness locates the situation within the horizon of a tradition that casts its own shadow of aboutness over and around the situation. Gadamer comments that "we must always already have a horizon in order to be able to place ourselves within a situation" and that "If we place ourselves in the position of someone else, for example, then we shall understand him, ie become aware of the otherness, the indissoluble individuality of the other person, by placing ourselves in his position" (1975:271-2). But what mediation must achieve through *other*-regulation is to place the mediatee within a situation such that the actions of the mediatee that are produced by *other* mediation, cast the same shadow, drawing the situation into the current of consciousness through which tradition flows.

The of-ness and about-ness that are manifest in awareness and consciousness together constitute the historical dimension of being, what Ortega calls the radical reality that is "my life" and what Gadamer calls "effective-historical-consciousness".

"History is the systematic science of the radical reality, my life. It is therefore a science of the present in the most rigorous and actual sense of the word. ... There is no *actio in distans*. The past is not yonder, at the date when it happened, but here in me. The past is I - by which I mean my life" (Ortega, 1941:223).

"Historical consciousness must become aware that in the apparent immediacy with which it approaches a work of art or a tradition, there is also contained, albeit unrecognized and hence not allowed for, this other element. If we are trying to understand a historical phenomenon from the historical distance that is characteristic of our hermeneutic situation, we are always subject to the effects of effective-history. It determines in advance both what seems to us worth inquiring about and what will appear as an object of investigation, and we more or less forget half of what is really there - in fact, we miss the whole truth of the phenomenon when we take its immediate appearance as the whole truth" (Gadamer, 1975:267-8).

Awareness is our anchor to the present. To be aware is to be aware now. In this sense, now is not a point in time but a moment of awareness that may endure and stretch across time. From the perspective of the *self*, all actions are experienced as happenings and what happens is happening now. The before and after in a sequence of actions is contained within the now of awareness which fills the gap between past and future. Consciousness is our link with history and destiny. To be conscious is to situate awareness within a context that is not immediately given but stretches across the here and now and beyond the finite existence of singular persons. This is the significance of human mediation. The aboutness of experience is constituted by the actions performed that generate experience. But the source of these actions and, hence, the source of our consciousness or experience of aboutness is external to the *self*. Consciousness is the

subjective face of history if by that term we mean not a sequence of events in time, the actions performed by actors in the past, but the transformation of being in which the actions of others are enfolded in consciousness. In this sense, history is the present that moves through time pulling the past and pushing the future not as before and after but as the now of being, of an understanding that eludes the order of time. Ortega expresses the idea of history as presence as follows:

"That past is past not because it happened to others but because it forms part of our present, of what we are in the form of having been, because, in short, it is our past. Life as a reality is an absolute presence: we cannot say that there is anything unless it be present, of this moment. If, then, there is a past, it must be as something present, something active in us now" (1941:212)

The temporal dimension of action, the fact that it occurs in time, that it takes or occupies time, does not coincide with history. What occurs in time does not necessarily occur in history. Before and after are relational terms that apply to actions whereas past and future are dimensions of consciousness, ways of understanding now the aboutness of the before and after of happenings. Consciousness is the link between time and history.

History as it is lived through tradition intersects the presence of awareness by substituting, through mediation, the actions of the *other* for those of the *self*. But the agent that emerges when new understanding is achieved and re-asserts its-*self*, through action whose source lies in the otherness of its consciousness, is an agent for whom history is not *other* but *self* and for whom being - what Ortega calls *authentic being* - is not existing in the world but participating in history.

"Here, then, awaiting our study, lies man's authentic 'being' - stretching the whole length of his past. Man is what has happened to him, what he has done. Other things might have happened to him or have been done to him, but what did in fact happen to him, this constitutes a relentless trajectory of experiences that he carries on his back as the vagabond his bundle of all he possesses" (1941: 216).

Understanding that is achieved through mediation can only be an understanding of a self whose consciousness is constituted by others. Consciousness is the continuity that transcends the finite being of particular persons. Almost in a literal sense, consciousness is handed over and down through the generations. This process of handing down, of pulling history across time, is what we call tradition and culture is the substance that is passed along. The process of cultural transmission is accomplished through the medium of action and it is these actions, that constitute tradition and whose source is external to the actor, that become enfolded in consciousness. The significance of Vygotsky's frequently quoted statement that "The path from object to child and from child to object passes through another person" (1978:30), is that what the child encounters is not only a material object but a cultural object that both embodies and is embodied by a tradition whose path extends not only beyond the child but also beyond the other person. Although the mechanisms that underlie tradition and culture can be traced and identified in the process of direct other-regulation or overt instruction, the weight of tradition and the density of culture rely on more covert forms of mediation.

The way things are done or lives are lived within any tradition are determined not only by direct instruction but by the cumulative accomplishments that constitute tradition and

culture. These are the works, the products of human labour that embody the cultural forms through which life is lived. Art and science, craft and technology, all serve to mediate actions, to orchestrate the doings within and across domains of activity. The availability and use of tools and symbols in the service of art and science (hammer and sickle, bow and arrow) facilitate certain actions and inhibit others. Ortega argues that the world is not a "reality made up of things" but an "immense pragmatic or practical reality" consisting of "pragmata".

"They are only as facilities and difficulties, advantages and disadvantages whereby the I that each one of us is can succeed in being. They are, then, in effect, instruments, utensils, chattels, means that serve me - their being is a being for my ends, aspirations, needs; or else they prove to be obstacles, lacks, impediments, limitations, privations, stumbling-blocks, obstructions, reefs, quagmires. And for reasons that we will see later, being "things" *sensu stricto* is something that comes afterwards, something secondary and in any case highly questionable" (1957:62).

The important point is that the products of human action, whether of a symbolic or material nature, function as second order mediators. Unlike the raw objects of nature, objects that are the products of labour, of actions directed outwards at and on the world, are the external or objective expressions of understanding. Where clocks are abundant, people lose the facility to judge the time of day by glancing at the position of the sun and in an increasingly digital world, children are unable to fathom the time by the position of hands on a clock face. Only in a dead tradition are its works displayed as the ornaments of culture. In life, tradition flows through its works which order and structure not only our actions but also the awareness and consciousness that we experience as life.

These two components of experience, awareness and consciousness correspond to the structure and design of objects that are the products of action; works that are produced by work. All tools have the characteristic of embodying both structure and design and their function as second order mediators can be illustrated by returning to the example of scissors. When a scissor works, it reveals its design in its structure - the articulation of two blades through a central pivot. Tools are about the function they perform and cutting is what scissors are about. The structure of scissors, how the parts relate to the whole can be distinguished from its design, that which the structure designates which is the function of cutting.

To understand a scissor is to understand its function and this is only possible through action. The purpose of a scissor, its design, inheres in its functional potential, its action. To the uninitiated, a person who has never encountered a pair of scissors, its cutting function would remain opaque unless it was made to work. Nothing in a scissor at rest, when its blades are closed with their sharp edges set against each other, suggests that it is a cutting instrument. No sharp edge is perceptible to sight or touch. In the absence of a mediator, how does a scissor mediate or regulate action? Its structure constrains what can be done to it and with it. The actions that the structure of a scissor compels us to perform are those of grasping and releasing. The thumb and forefinger close on each other and then open in a continuous and repetitive motion. In this way, the structure of the scissor constrains the actions that can be performed on and with it. Once thumb and forefinger are enclosed within the handles that invite their insertion, their movement is

limited to opening and closing. When set in motion its design is revealed. Two sharp edges are exposed and when closed against a suitable object, the function of cutting is revealed.

What, as opposed to how, a scissors mediates through the actions it regulates is its design which above all is its aboutness. In its operation as a functional structure⁹, its design is revealed. By regulating actions through the constraints imposed by its structure, the scissor mediates in the same way as any *other* by intercepting the *self* or pre-understanding of the mediatee. But in what way can an inanimate object such as a scissor mediate consciousness through the actions it regulates? In what sense can a scissor explain or reveal understanding? The answer lies in the design that distinguishes a work from a lump of matter and in terms of which it is able to function as a second order mediator, one step removed from the direct mediation or instruction by another person. The *snip-snip* of the scissors, its functional structure or working, embodies its design. But this design, this designation of cutting is a projection of the consciousness of the designer whose purpose is to make an object or instrument that cuts, an instrument that is about cutting. For this reason, works or objects that bear the imprint of design serve as second order mediators. The designer's *self* is projected through action into the work where it inheres as design in the structure of the work. This structure, by regulating the actions of the scissor user, reveals its design in its working. In this way, consciousness is mediated through work and works. As in the case of direct other-regulation or instruction, consciousness does not leap from *self* to *self* but is constituted through the mediation of action. What Gadamer calls the "miracle of understanding, which is not a mysterious communion of souls, but a sharing of common meaning" (1975:260), has its origin in the mediation of action. Works that bear the imprint of design function as second order mediators by explaining through the actions they regulate the *self* of the designer whose actions in producing a scissor reveals a consciousness of cutting.

The generative power of second-order mediation is splendidly captured by Vikram Seth in his captivating novel *An Equal Music* in which we encounter the main character, who is the second violinist in a string quartet, speaking his mind.

"I love every part of the Haydn. It is a quartet that I can hear in any mood and play in any mood. The headlong happiness of the allegro; the lovely adagio where my small figures are like a counter-lyric to Pier's song; the contrasting minuet and trio, each a mini-cosmos, yet each contriving to sound unfinished; and the melodious, ungrandiose, various fugue – everything delights me. But the part I like best is where I do not play at all. The trio really is a trio. Piers, Helen and Billy slide and stop away on their lowest strings, while I rest – intensely, intently. My Tononi is stilled. My bow lies across my lap. My eyes close, I am here and not here. A waking nap? A flight to the end of the galaxy and perhaps a couple of billion light-years beyond? A vacation, however short, from the presence of my too-present colleagues? Soberly, deeply, the melody grinds away, and now the minuet begins again. But I should be playing this, I think anxiously. It is the minuet. I should have rejoined the others, I should be playing again. And, oddly enough, I can hear myself playing. And yes, the fiddle is under my chin, and the bow is in my hand, and I am" (1999:110-111).

⁹ See Miller (1990) for a more detailed discussion of the concept of functional structure.

In the above passage, agency is abandoned not as an act of will but as an act of willing surrender and poignant submission to a melodious *otherness* that transports the silent player to the end of the galaxy and returns him unaware that he has broken his silence and in so doing finds himself rejoined with the others in their collective play. "Our synchronous visions merge, and we are one: with each other, with the world, and with that long-dispersed being whose force we receive through the shape of his notated vision and the single swift-flowing syllable of his name" (Seth, 1999:114-5).¹⁰

Even further removed from the tangible other-regulation of direct instruction, but no less potent in their effects, are the institutions, social structures, or cultural forms, constituted by bundles of relations between people and between people and their products. This third order mediation captures the wide angle of history where work and works are integrated into the systems and super-systems of society. As instruments of mediation, art and science, symbol and tool, are embedded in networks of relations. The innocuous tick-tock of time has an historical significance that transcends the mediating function of the clock as an instrument of time. It is surely no mere caprice that the standard reward for a life-time of labour is the wrist watch. In the super-system that we call the modern world, the gift of a time-piece is the symbolic return of that chunk of being that is surrendered when we enter the modern world of work; a form of life that is governed by the relentless swing of the pendulum. History, tradition, and culture all show their face behind the dial of the clock. In art, science, commerce, industry, law, education, even recreation - all the institutions that constitute our modern world - the clock regulates our actions, in different ways and for different ends. The unsuspecting child who delights in learning to tell the time becomes enmeshed in a tradition in which action is mediated by the clockwork ethic; punctuality, efficiency, productivity. What distinguishes our modern experience of time, as mediated by the clock through the institutions of society, is not an awareness of the passing of the day or seasons of the year that are shared by all but a consciousness of what the passage of time is about. In the modern world it is about productivity, efficiency, and punctuality that are states of being, pre-understandings that constitute the self, focal points of consciousness.

This third order of mediation can be illustrated by extending the scissor example. Here the analysis shifts from the design or aboutness of scissors to the aboutness of the cutting that the scissor generates. The what, when, and how of cutting extends beyond the scissor and its operator. In the production of a garment, cutting is about the manufacture of an item of clothing and this item is about satisfying a need for protection or adornment. But the garment may also be about satisfying some other need for which the garment is either exchanged or sold. Of course the analysis can be extended into familiar categories such as means and relations of production, class, capital, markets, enterprise, initiative, and so on. As we move through these analyses, from the aboutness of scissors, to the aboutness of cutting, to the aboutness of garments, through to the aboutness of commodities and of the economy, consciousness spreads out and is contained at its limit in the concept of society. The structure of society is reflected in its social systems or institutions and its design finds expression in the functional structures we call culture.

¹⁰ In this passage, the reference to the composer refers to Bach.

The regulative order of society does not imply a Durkheimian collective consciousness or superorganism any more than the regulative power of scissor implies a cutting consciousness immanent in the scissors. Ingold distinguishes "three senses of the social - the interactive, the regulative, and the constitutive". He rejects both the Spencerian "superorganism" and the Durkheimian "superorganism" versions of the regulative sense of sociality (1986:222-244). The institutions or social systems that together constitute society regulate action in the same way as any other mediator by intercepting the *self* of the mediatee and thereby reducing an agent to an actor. Ortega uses the terms "inhuman man" and "impersonal man" to convey the loss or absence of agency that produces what he calls "this strange contradictory entity."

"Now, the 'usual', the customary is something that we do because it 'is done'. But who does what 'is done'? Why, people. Very well - but who is 'people'? Why everybody and, at the same time, no one in particular. So here again we find no author of the usage, who willed it and is responsible for the reality that devolves to it as usage. Our coming and going in the streets and our dressing have this most strange condition: that we perform it ourselves, and hence it is a human act, but at the same time it is not ours, we are not its active subjects and protagonists; on the contrary it is decided, resolved on, and actually done in us by Nobody - the nobody who is indeterminate - and hence it is an inhuman act" (1957:182-3).

"But man, if he is truly man, is personal; the human phenomenon - we said earlier - is always a personal phenomenon. But here we have an impersonal man - 'one', on, se - who does what 'is done' [se hace] and says what 'is said' [se dice] - hence an inhuman man. And the momentous thing, when we ourselves do what 'is done' and say what 'is said' is that then the se, this inhuman man, this strange contradictory entity, is, within us, we are he" (1957:183-4).

What *society* regulates are the roles, or to use Bhaskar's term, "positioned-practices" (1979:52), that constitute social systems. In the case of the legal system, the roles of judge, prosecutor, advocate, juror, defendant, etc., are regulated by a canon that is the product of the collective and cumulative work of law makers whose consciousness inheres in the body of the law their labour has produced. These systems are structures defined by sets of relationships that obtain between roles. When we enter a social system we become part of its structure because entry is only possible by the enactment of a role. Socialization is term we use to cover the entry into *society* by the adoption of roles in the social structures or institutions that constitute society. Objecting that the concept "socialization" implies "the inscription of a Durkheimian regulative order on the 'raw material' of humanity - immature individuals", Ingold argues that the term "socialization" should be "dropped altogether" and replaced by "enculturation" to convey "what a unique individual acquires from other unique individuals of the same population in consequence of their interaction" (1986:262-3). In the same way that opening a bank account requires that we learn the rules of banking, entry into any social system requires learning of the "rules" that serve to co-ordinate the roles that constitute the system. The rules are prescriptions for the actions that must be performed or the roles that must be enacted for the system to work and also include the workings of objects (e.g., chequebook, credit card) and the actions they regulate. The way *society* works is reflected in the message often displayed in Butcher stores: *Banks don't sell sausages and we don't cash cheques*. The bank teller's enquiry, "How are you?" carries a very

different meaning from that of the doctor and the answer we give in each case is determined by the role we are enacting within a system of prescriptive rules or discursive scripts.

Once we enter a system (open a bank account, take up employment, commit a crime, etc.), or are entered into a system (school, religion, military) by some authority (parents, state, etc.), our actions are constrained in a manner that, in principle, is no different to the constraints imposed when thumb and forefinger enter the scissor handles. In the same way that the structure of a scissor both limits and facilitates the actions that can be performed with a scissor, social structures through their constitutive roles and relations between roles, facilitate certain actions while inhibiting others. But in the process, in the enactment of social roles, the aboutness of social structures is revealed in their working and, in this sense, the design of social functional structures is reflected in their working. The reason we do not respond to the bank teller in the same way as the doctor is because the former dispenses money and the latter medicine. Banks are about money, medicine is about illness. To the uninitiated, the aboutness of a social system, its design, is revealed through participation in its structure. But this structure must be understood as a functional structure, what Ortega calls a *usage*, that exists only in its working.

"It follows that, from the time we see the light, we live submerged in an ocean of usages, that they are the first and strongest reality that we encounter; they are, *sensu stricto*, our environment or social world, they are the society in which we live. It is through this social world of usages that we see the world of men and things, see the universe" (1957:191).

Long before the digital virtual world of computing, language has led us astray by conflating the virtual with the actual. The cutting object that we keep in a drawer and call a scissor only becomes a scissor when it cuts and it is in the cutting that it reveals its aboutness. Children are a constant source of amusement and sometimes embarrassment precisely because they either confuse or are oblivious of the aboutness of social situations, that is of the workings of social structures. A young child may well launch into a detailed medical history in response to the "How are you?" of a friendly bank teller. Not only children but all initiates into social structures stumble over the design as they work through and are worked through the system.

The situations we experience as part of a working social system have the same qualities of awareness and consciousness that constitute all experience. We become aware of the system, its component parts and their interrelations, and also conscious of what the system does in its working and our part in the doing. In terms of the scissor, our part in its doing is the cutting. To be conscious of a scissors is to understand that it is about cutting but it is also to understand that cutting is our part in its doing. Similarly, in the case of social structures, to be conscious of a role is to understand that its enactment is our part in its doing. This does not mean that we can necessarily explain how or what we do. It means that we experience ourselves in a particular way or, more accurately, that the experiences of the *self* are of a particular kind. But these experiences of the *self* constitute the being of the *self*. To say that I understand myself as a father (or experience myself as a father) is to say that I am a father and, conversely, to be a father, to enact the role of father, is to understand that I am a father.

The surrender of the *self* that is entailed by the *other*-regulation of actions that are prescribed by social roles, does not mean that socialization is like casting actors for a play. We enter social systems as actors but participate fully as agents. The surrender of agency that is entailed by all mediation as the interception of the *self* by the *other*, is only the start of a process that leads through understanding to the recovery of agency. But in this process, the agent is transformed. In the course of social life, as new roles are co-ordinated and old ones elaborated and refined, the horizons of consciousness expand. The agent who participates in society projects through action a consciousness that is multidimensional reflecting a *self* whose mode of being is not fragmented like the roles of an actor scattered about a scrapbook but is consolidated and integrated as understanding.

If society is understood as a functional super-structure, the working of the workings of systems constituted by agents then its design is what we mean by the term *culture*. In Ortega's words, "As you see, usages are interconnected and rest one upon another, forming a gigantic architecture. This gigantic architecture of usages is, precisely, society" (1957:221). As this analysis has attempted to show, the design of a functional structure mediates consciousness through action. Culture is the interface between doing and happening, a reservoir of consciousness externalized in the material and symbolic works that together constitute a tradition through which life is lived. The world we experience, the works we encounter, envelop us in a current of aboutness, a way of living our lives, of understanding, of being and becoming. That elusive entity, often called the *human spirit*, that moves through history and spreads through society, that constitutes the being of each finite life but is not confined to the finitude of discrete beings living particular lives, and that grounds and unifies the concepts of culture and tradition, is a consciousness whose form is the design of being and whose substance is understanding. As the culmination of tradition at a given time in history and place in society, culture is the subject or agent of mediation; that which mediates through the agency of people and their products or life forms. The object of mediation is being, understood as a process of becoming, of learning and unlearning, where the process entails the negation and overcoming of the *self* by the transformation of consciousness through action¹¹. This relentless process of reconstruction of the *self* that culminates in understanding is made possible by the work of mediation.

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¹¹ "There is therefore no direct interface between molecules and meanings, for between them stretches this hugely important middle ground of practical life in which our emerging properties and powers distance us from our biological origins and prepare us for our social becoming" (Archer, 2000:190).

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