

## Celebrating Divergence: Piaget and Vygotsky<sup>1</sup>

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### Key Words

Culture · Logic · Mental development · Piaget · Vygotsky

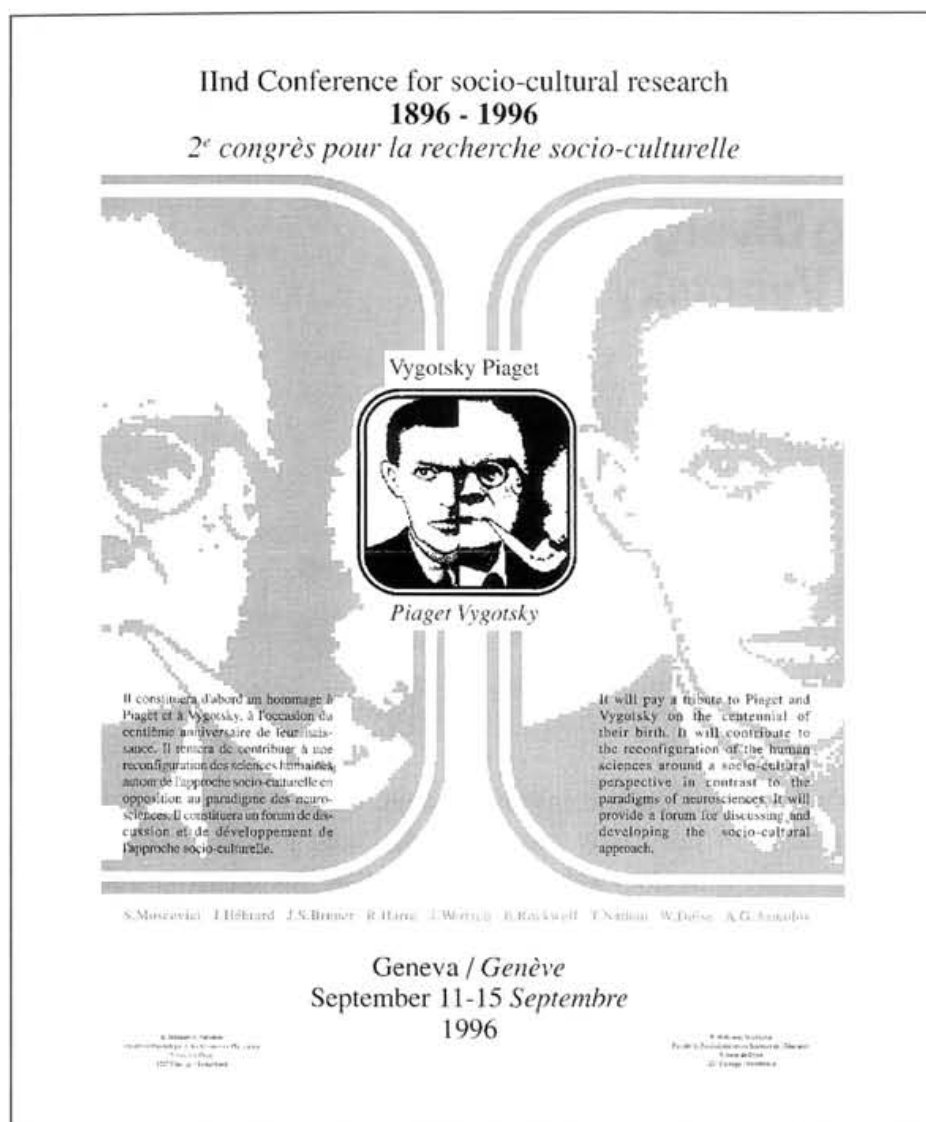
### Abstract

Contrasting Piaget's emphasis on the invariant logic of growth with Vygotsky's emphasis upon the centrality of culturally patterned dialogue in the enablement of growth, one is led to conclude that their two approaches were incommensurate. This incommensurateness may express a deep and possibly irreconcilable difference between two ways of knowing: one seeking to 'explain' and the other to 'interpret' human growth and the human condition. We are blessed to have had such gifted exponents of the two views at the very start of our discipline, for their divergence has alerted us to the deeper puzzles posed by research in human development.

First, let me say explicitly what all of us must have been thinking implicitly while contemplating this double centennial. What great good fortune for us, we students of human development, to have had two such giants, Jean Piaget and Lev Vygotsky, inspiring our quest. And it is not just their *intellectual* power that we celebrate, but their greatness of spirit and courage, their willingness to stand up to and to admit the baffling complexities of their subject – the growing mind. They taught us not to oversimplify. For them, mind was never 'nothing but'. They bequeathed us a heritage free of reductionism – one truly to be treasured (fig. 1).

But today our task is not only to celebrate the past but to anticipate the future. Before turning to that task, however, let me say just a word more about resistance to oversimplification. Science demystifies not by ignoring mysteries, but by facing up to them. The unique mystery of mind is its privacy, its inherent subjectivity.<sup>2</sup> But for all its

<sup>1</sup> A keynote address delivered in Geneva on 15 September 1996 at a joint meeting of the 'Growing Mind Conference' in honor of the centennial of Jean Piaget's birth, and the 'Vygotsky-Piaget Conference' of the IIInd Congress of Socio-Cultural Research, honoring both Lev Vygotsky's and Piaget's centennial.



**Fig. 1.** Poster from the conference honoring the centennial of Piaget's and Vygotsky's births where the author gave this keynote address. Copyright Society for Sociocultural Research.

privacy, mind nonetheless generates a product that is public. It generates worldly, useful knowledge, though that knowledge is constructed and never directly apprehended in the objectivist's sense. If this is so for our knowledge of the natural world, it is even more strikingly so for our knowledge of the social world and, in spite of introspection, even for our knowledge about ourselves. What is unique about us as a species is that we not only adapt to the natural and social worlds through appropriate actions, but we also create theories and stories to help us *understand* and even *explain* the world and our actions in it. And we have cared enough about these theories and stories to have burned each other at the stake or even to have gone to war over them.

<sup>2</sup> Both Piaget and Vygotsky were very explicit on this point. See Piaget [1974a, pp. 28ff]; Bruner's [1987] preface to volume one of Vygotsky's collected works; and also Joravsky [1989, p. 262ff].

Piaget and Vygotsky dedicated their lives to the study of how human beings grow to construct and exchange theories about the world and about each other. Each proposed an epistemology that recognized the essentially developmental nature of such theory building. Both were as full of awe at the cognitive constructions of the growing child as they were at the insights of a Pythagoras, a Pascal, a Tolstoy. Their respect for the growing mind changed the study of human development, indeed the intellectual climate of our times.

Yet, these two great men, for all their ample spirit, were, as we all know, profoundly different in outlook. Piaget's genius was to recognize the fundamental role of logic-like operations in human mental activity. Vygotsky's was to recognize that individual human intellectual power depended upon our capacity to appropriate human culture and history as tools of mind. If Piaget sensitized us to the analytic powers of the INRC Four Group and the Sixteen Binary Propositions in explicating the powers of mind, Vygotsky [1962] woke us to the meaning of Francis Bacon's dictum: 'Nec manus, nisi intellectus, sibi permissus, multam valent: instrumentis et auxiliis res perficitur'.<sup>3</sup> ['Left to themselves, neither hand nor mind alone amounts to much; they are perfected by the instruments and aids that they employ.']

### Piaget's Perspective

Such a difference, with one thinker emphasizing the role of inner, autochthonous logical processes, and the other the shaping role of culture, inevitably led to sharp divergences in their approaches to mental growth. I want now to explore these differences with a view to speculating upon whether their views are compatible at some deeper level, whether they are incommensurate though complementary; or even, indeed, whether their conceptions of the growth of mind are simply incompatible. Let us not fret about the outcome of our inquiry. Recall Niels Bohr's maxim, 'The opposites of great truths may also be true; it is only the opposites of small truths that are false.'

Mind, Piaget argues, can be described by (or is?<sup>4</sup>) an organized group of logical operations that mediate between the world, *eo ipso*, and our knowledge of that world.

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<sup>3</sup> Piaget's view of the roles of tools and technology in shaping the growing mind, strikingly different from the Baconian one, is discussed in his *Prise de conscience* [1974b]; and in his *Réussir et comprendre* [1974c]. The very first paragraph of the Preface of the latter volume implicitly casts the Baconian idea into doubt by a citation from one of its latter-day critics (cf. *Réussir et comprendre*, p. v).

<sup>4</sup> Piaget has always been ambiguous about whether logical structures and operations were evidenced *in* the child's repertory of acts or whether, rather, they characterized Piaget's form of a theory of the child's mind. The 'existence' of such structures *in* the child's mind requires corroboration by reference to specific behaviors that instantiate *all* the specific properties entailed by the structure. That task was never undertaken by Piaget and, indeed, it is dubious whether such a claim could ever be corroborated, as Feldman and Toulmin [1976] point out, given what is entailed by the idea of logical structure. Certainly, recent research on children's 'theories of mind' do not corroborate claims about 'Genevan' formal logical structures in the mind of the child. Moreover, it is as philosophically implausible to claim that there can be *one and only one* mental structure operative in anybody's mind as to claim there is one and only one 'mathematical' structure that accounts for nature. The first and still the most cogent critique of the Piagetian position that a 'logically structured' set of operations exists 'in the mind' rather than in the theorist's account of mind is to be found in Feldman and Toulmin [1976].

Since the world cannot be known directly but only by the mediation of these logical operations, our knowledge then is a *construction* to be tested further against ongoing action in the world. Mind's logical operations, which have their start in the internalization of action, constitute a logical calculus whose scope and power grows through decantation from immediate action. Like any logical calculus, the operators in the Piagetian mental calculus generate putatively contradiction-free constructions of the world that can be tested through their success in action, but also by their power to provide understanding. For Piaget, knowledge of the world is made, not found.

Mental growth consists in the child 'moving' from simpler to more complex systems of logical operations, the process being effected by the transformation and internalization of action into thought. Once action has become internalized into thought and becomes decentered and reversible, the stage is set for the growth of formal operations in which thought itself becomes its own object and can, accordingly, be translated into conscious propositions. Concrete operational thought requires understanding of the identity of an object across transformations in its appearance or in the actions we perform upon it. Formal operations presuppose a capacity to redescribe thought in the form of propositions, the precondition for which is, in some sense, being able to know what one knows. In both cases, it has always been unclear whether consciousness is a precondition for or a concomitant of taking a cognitive step upward to a higher level. Indeed, the function of consciousness in growth has always seemed to me to be an unsettled issue in Piaget's theory.

Nor, more generally, was it ever plain, despite the pages devoted to the subject, what propelled the child's growing mind from one stage of logical operations to the next higher one. Was it *prise de conscience*, the recognition of contradiction, decantation, failure of praxis, or what? What *has* always been abundantly clear, however, was that mental growth followed an invariant course, whatever propelled it or whatever the *aliment* upon which the growing mind was nourished. So invariant was this course, indeed, that the very history of human thought had itself followed it – this was Piaget's genetic epistemological challenge to the historians of science and knowledge.

In most general terms, what was said to *impel* growth along this invariant course was *disequilibrium*, a process created by the relation between two component processes. Encounters with the world were either fitted into – *assimilated* to – previously existing mental structures, or existing structures were changed to *accommodate* them. At one extreme, for example, there is the assimilation of play; at the other, the uncomprehending accommodation of imitation. Neither alone supports adequate praxis nor achieves understanding. But the interplay or conflict of assimilation and accommodation leads to cognitive growth – whether by provoking decantation, consciousness, or whatever. It would not be unfair to say that the dynamics of disequilibrium have never been clear.

In consequence of this lack of clarity, the *causes* of growth in Piagetian theory seem chronically under-specified, though the *invariant direction* of that growth seemed clear enough. The theory, in consequence, has become more a *theory of the direction of growth* than of *the causes of growth*. But Piaget's decision to concentrate upon the necessary *direction* of mental growth rather than upon its contingent *causes* was daring, brilliant – and characteristic. For historically, efforts to study growth's causes had come virtually to a dead end. Piaget's new emphasis miraculously broke the thrall of old-line associationisms and learning theories that dated back to Aristotle, and that had been regularly renewed in more recent times by empirical philosophers from Hobbes and Locke



onward. Such theories were too subject to the contingencies of encounter to satisfy Piaget's need; all failed to deal with the inherent *systematicity* of mental growth by putting the systematicity in the world rather than in the growth of mind itself. It was the latter that posed Piaget's *problematik*. Never mind that disequilibrium and decentration were plagued by underdetermination. At least they kept intact his more general view of growth as *systematic* rather than as driven helter-skelter by the contingencies of association and reinforcement. Never mind his views led to endless problems with *décalage* – why systematic growth in one domain of knowledge does not always generalize to others; the 'décalage issue' may yet lead us to a better understanding of what constitutes *domains of knowledge* [Hirschfeld and Gelman, 1994].

So much for the bare foundations of Piaget's theory. Obviously, I have oversimplified shamelessly. But before moving on, let me note one puzzling gap in his theory. It concerns *intersubjectivity*: how we manage to know each other's minds, know them well enough to aid each other in constructing our worlds through negotiation, instruction, enculturation, and so on. Even the well known work of Doise and Mugny [1979] saw the role of 'others' in Piagetian tasks as, so to speak, compelling decentration by proposing different solutions. Others helped not as collaborators or fellow members of a culture, but as challenging a reigning solution by proposing a different one – a component process in the experimental or 'nomothetic' method that led to cognitive growth.

To make this clear, I must explain how Piaget described his task as a developmental psychologist. In his densely packed Unesco book on the human sciences [Piaget, 1974a], he characterizes knowledge achievement as divisible into four 'methodological domains'. The first was the nomothetic, guided by decentered (i.e., objectified) analytic experimentation. This included his own version of development psychology, and its domain was the development of nomothetic understanding in the young. A second domain was historical, 'the purpose of which is to reconstitute and interpret the unfolding of all manifestations of social life across time' [Piaget, 1974a, p. 28]. The third domain was the 'legal sciences' which explore norms or 'duties' (sollen) without regard to their causes. And finally there is the fourth, the philosophical, whose aim is to coordinate all forms of knowledge into a 'concept of the world'.

To repeat what I said, I think Piaget, as a self-styled nomothetic scientist, saw his task as studying the growth of nomothetic knowledge construction in the child. And even in that domain, his views betray a striking methodological, anticultural individualism. His neglect of intersubjectivity (and culture altogether) was not so much inadvertent, I think, as principled and self-imposed.

Piaget's choice of formal logic as a model of human mental operations also distanced him from the historical cultural domain, where interpretive cognition prevails. It obviously led him to neglect any mental operations not subsumable in a well-formed logical calculus – notably those *hermeneutic* operations involved in 'reconstituting and interpreting' the social world. Some critics, like Stephen Toulmin [1978], even accused him of believing that children could simply reinvent the culture. Yet, on the other hand, Piaget's early work on moral development reveals a sensitivity to the growing child's *reinterpretation* of extant cultural norms, even if he shows little interest in interpretation as a mental process in its own right. So the gap in Piagetian theory includes intersubjectivity and the forms of culture that rest on its operations – matters to which we will revert later.

## Vygotsky's Perspective

Now to Vygotsky. Extracting the foundations of his theory is not easy, for his was not a hypothetico-deductive style, whether for lack of time (he began his systematic study of psychology at 28, and after much official harassment, died of tuberculosis before 40), or perhaps because his early literary formation inclined him more toward intuitive aperçus than propositional derivation. But I think far more important than either of those was Vygotsky's form of revolutionary political activism, which I will come to presently. So be it.

While for Vygotsky, as for Piaget, mind mediates between the external world and individual experience, Vygotsky never conceived of mind as expressing a logical calculus. Mind, rather, comprised process for endowing experience with *meaning*. Meaning making, in Vygotsky's view of the matter, requires not only language but a grasp of the cultural context in which *language is used*. Mental development consists in mastering higher order, culturally embodied symbolic structures, each of which may incorporate or even displace what existed before, as with algebra absorbing and replacing arithmetic. These higher order systems are cultural products. As instruments of mind, they do not mature exclusively through endogenous principles of growth. They are not only appropriated from the tool kit of the culture and its language, but depend upon continued social interaction. Consequently, the most central question for Vygotsky is how a culture's symbolic tools manage through social interaction to get from 'outside' into our 'inside' repertory of thought.

Indeed, 'internalization', though never fully explicated by Vygotsky, is perhaps the major *deus ex machina* in his system. But unlike learning by association, internalization also implied systematicity for him: e.g., once internalization occurs, '... the child does not have to restructure separately all of his earlier concepts, which indeed would be a Sisyphean labor. Once a new structure has been incorporated into his thinking ... it gradually spreads to the older concepts *as they are drawn into the intellectual operations of the higher type*' [Vygotsky, 1962, p. ix, italics added]. But 'being drawn into' such operations also relies upon social exchange, suggesting that some of the systematicity of growth resides in the systematic nature of discourse and culture itself.

For Vygotsky, mental life first expresses itself in interaction with others. The results of such interactions then become internalized and enter the stream of thought. Since social interaction is principally constituted and mediated by speech, what gets internalized into the child's stream of thought are the meanings and forms generated in verbal exchange which themselves are products of the broader cultural-historical system. Thus equipped, mind not only expresses the culture but, by virtue of the generative powers of these systems, like language, it is able to be 'free' or to go beyond being a mere slave of the prevailing cultural order – a liberationist view to which we'll return in a moment.

The generative powers of language-in-mind, Vygotsky tells us, depend upon consciousness. But for him (as for Piaget) its *modus operandi* was never well developed. Vygotsky's views about consciousness obviously had deep political implications in those times, a kind of Marxist ideological hot potato, for his views provoked an official 'battle of consciousness' that went on for years, even after his death [Cole and Scribner, 1974; Joravsky, 1989]. But we need to consider one more matter before we can clarify what might have been meant.

That matter is the Zone of Proximal Development (ZPD), so central to Vygotskian theory. To put it simply, the ZPD is the gap between what one can do on one's own,

unassisted, and what one can do with hints and aids from a knowledgeable other. The ZPD is where pedagogy and intersubjectivity enter the Vygotskian picture. But how does pedagogy work? Through shielding a learner from distraction, by forefronting crucial features of a problem, by sequencing the steps to understanding, by promoting negotiation, or by some other form of 'scaffolding' the task at hand [Brown and Campione, 1990; Bruner et al., 1977; Tharp and Gallimore, 1988; Tomasello et al., 1993; Wood et al., 1976]? How does the helper/tutor know what the learner needs? Here, intersubjectivity enters – alas, more implied than explicated. Most important, however, the ZPD poses specific questions as to how culture gets internalized by the mediation of others [Shore, 1996]. As Tomasello et al. [1993] point out, the very transmission of culture depends upon (a) some principled concordance between a learner's capabilities and what the culture has on offer; (b) some person in the culture, a tutor, who can sense what a learner needs and delivers it, and (c) some shared agreement about how such an intersubjective arrangement is supposed to work canonically in *this particular culture*, as in Rogoff et al.'s [1993] recent comparative study of Salt Lake City middle-class 5 year olds and their mothers in contrast to their counterparts in a Guatemalan Mayan Indian town. To put it bluntly, the ZPD recognizes that *Homo* is the only species that uses teaching in any systematic way and asks what it takes for somebody to teach or be taught by another.

So, if Piaget was preoccupied with the invariant order of mental development, Vygotsky was on his part preoccupied with how others provide the cultural patterning that makes the process of development possible. But please note that neither was blind to the other alternative – as with Vygotsky's belief that mental development moved from mastery of concrete particulars to higher mastery of the abstract, or in Piaget's belief that progress to the propositional stage required cultural support [Piaget and Inhelder, 1958].

How relate these two great systematists to each other? Certainly not by ignoring their profound differences. For even their 'founding missions' were incommensurate. Piaget grew up on the edges of Neuchatelois Protestant theology, where, as we know from Vidal's [1994] study, he began with a passion to 'naturalize' or secularize religious views about the unity of creation. His passion for systematicity expressed itself even in his boyhood studies of mollusks. In early adulthood, his passion for systemic order recentered itself in the epistemic domain and in how the growing mind achieved a connected, systematic world view.

Vygotsky, by contrast, grew up in a world of revolution, a world of excited promise. His Russia and Piaget's Switzerland could not have been further apart. Nor could Vygotsky's skeptical, rather Jewish, literary irony, be further removed from Piaget's more Protestant and intellectually stoic single-mindedness. Even Vygotsky's Marxism had a subjectivist, interpretive feel – more like Gramsci, say, than like the doctrinaire Russian nomenklatura of his day. Like Gramsci, he believed that culture shaped mind for hegemonic ends, and that a change in the cultural order could liberate consciousness from hegemonic bonds [Gramsci, 1995]. For him, *nature* was there to be used and transformed by *culture*. 'Culture', he says in an early paper, 'does not produce anything apart from that which is given by nature. But it transforms nature to suit the ends of man' [Vygotsky, 1929, p. 418], and this transformation is effected by the child 'mastering ... the habits and forms of cultural behavior, the cultural methods of reasoning' [Vygotsky, 1929, p. 415].



I cannot stress enough the liberationist quality of Vygotsky's Marxism. But it was not that unusual in his day. Many Russian literary intellectuals saw Marxism as a lever for prying the Russian mind from its Procrustean bed of 'orientalism' and Orthodoxy, its feudal patriarchalism [Joravsky, 1989]. Indeed, Luria's [1976] renowned study on the impact of collectivist farming, inspired by Vygotsky, was typical of this liberationist optimism. Even Lenin's Minister of Culture, the charismatic and later discredited Lunacharsky, urged Russian poets and painters to liberate the Russian people with the 'Shock of the New' [Hughes, 1991]. Vygotsky himself, in *Language and Thought*, even likens Marxism to earlier 'scientific' revolutions that freed man from superstitions about nature.

What better instrument than the ZPD for assuring that promise of almost limitless growth? It served equally well as activist doctrine and scientific theory. We had it in us naturally to move ahead, given the right social arrangements and opportunities. Perhaps Piaget's invariant order of growth served a dual function for him as well, joining his earlier metaphysical-religious convictions with his later scientific ones. Each was surely a child of his time and place.

### **Fruitful Incommensurability**

But looking ahead, we all know that any overall theory of mental development (assuming there will ever be such) needs to account *both* for why mental development is so often steadfastly invariant, so resistant to inspired pedagogy, so limited in transfer, and, as well, for why mental development sometimes leaps swiftly, brilliantly, opportunistically, even dizzyingly. So should we try to combine Piaget and Vygotsky into a common system in the hope of explaining both extremes of this astonishing human variability? I think that would be naive. The justifiable pedagogical optimism of cultural revolutionaries is *not* just the sunny side of the equally justified stoicism of principled pedagogical 'realism'. The two perspectives grow from different world views that generate different pedagogical strategies, different research paradigms, perhaps even different epistemologies, at least for a while. Better each go their own way. Let the Dionysian partisan activists specialize in finding the levers of change – e.g., how collaborative learning environments empower learners, what scaffolding helps learners over what seemed before to be 'innate' constraints. But also let the Apollonian realists explore 'natural' constraints and seek out the regularities they impose on development, wherever found in whatever culture. The counterpoint of the two is surely what creates excitement and invention. I think history bears me out. My dear friend, Thomas Kuhn, was not alone in celebrating the energizing counterpoint of conflicting paradigms. It suffices that each side know what the other is up to, to form an 'epistemic loyal opposition' for each other.

But there is a deeper reason for scorning facile reconciliation. The two perspectives under discussion may represent two incommensurate approaches to development. One is concerned with knowledge in the light of its universal or inherent *validity* and *verifiability*; the other with knowledge as local, context bound, particular [Smith, 1995, p. 9]. In classic terms, one studies thought in its nomothetic and explanatory manifestation, the other in its idiographic and interpretive expression. Niels Bohr's maxim again: the opposite of great truths may also be true?



Let me, finally, explore this possibility – that the two approaches constitute two principled, incommensurate ways by which human beings make sense of the world – by *proof* and universal logical necessity, and by *interpretive* reconstruction of relevant circumstances. The first, the nomothetic, aims to convert intuitions and hunches about recurrent regularities into causal statements by the use of logical and empirical test procedures. Its outcome eventually takes the form of robust scientific theories, preferably framed in logico-mathematical terms. But certain domains of knowledge seem not to be amenable to such standard nomothetic science, particularly domains in which human beings are transactionally involved, reacting to each other in anticipation of how the other might react to their reaction as in daily life and in history.

To comprehend such circumstances, we characteristically use another way of making sense. Its objective seems less to prove or verify than to construct a meaningful *narrative*, or story. If verificational sense making seems better to fit the world of nature, the narrative mode seems a better fit to the world of human social interaction. Rather than testing our intuitions about the causal or logical basis of experienced regularities as in the nomothetic mode, we seek in the second mode to explicate experience by converting it into a narrative structure. *Causal necessity* in the first mode is matched by a sense of *narrative necessity* in the second. But narrative necessity, unlike logical or inductive proof, does not yield unique or preclusive descriptions: there can be several equally compelling stories about the same set of ‘events’. And since these ‘events’, so-called, can and usually do include the indeterminable intentional states of people involved in the story, they may never be subject to total confirmation. It was a positivist tenet that narratives could be neatly divided into the true and the fictional. But that innocent binary has fared poorly in our times. True stories are as shaped by narrative necessities as fictional ones. Even in the writing of history, you cannot conceal an underlying narrative by recounting the story in presumably testable, nomothetic ‘covering laws’ drawn from ‘scientific sociology’ [Danto, 1985; Hempel, 1965]. For narratives, in their very nature, create the shape of the events you must deal with, make them their ‘functions’ [Propp, 1968].

We know now that narratives construct a social world that, in Durkheim’s [1915] terms, has exteriority and constraint. They are constitutive of the realities they depict. Stories not only generate social realities, but become hardened into institutional structures that then perpetuate and enforce them – as with legal codes enforced by police powers. For narratives inevitably presuppose norms and legitimacy, as when (in the law) certain stories with certain outcomes are taken to be matters of ‘state interest’. But all narratives, not only ‘law narratives’ recount how a norm or standard was breached or might be breached, how that breach created a condition requiring redress. Plots, episodes, and characters, moreover, are virtually always tokens of more general types, local tokens that fit a more universal genre, even making them translatable from one culture to another. This suggests that the so-called necessity of narrative is more universal than sometimes thought, though different from the logical necessity of formal proof. Whether this narrative necessity is, as it were, something inherent in the human condition or in mind itself, whether it is inherent in the universal structure of language, whether it grows out of human prehistory – none of this is clear, though all have come to be better understood in recent decades.

Following von Wright [1971], we say that the method of proof yields *explanation* with its attendant benefits of predictability, easy falsifiability, and replicability. The method of narrative authentication yields *understanding* after the fact, and rests upon

interpretation. We know now that the two are not antithetic to each other, that explaining and interpreting have different developmental trajectories, have different social uses, and must be studied by quite different methods. We have also come to understand, as already noted, that they cannot be reduced one to the other, nor is it clear whether they derive from some deeper set of common principles. All that we can say is that causal explanations can often be reframed in narrative terms, just as stories can be reformulated as sets of testable propositions concerning causation or contingency. In such reframings, however, the structure of the initial account is destroyed, though the initial and transformed versions may be recognized (perhaps mistakenly) as 'referring' to the 'same' events. The two modes of knowing, while distinctive and irreducible, bear an anomalous relation to each other that still defies full epistemological analysis [Bruner, 1985, 1990, 1993, 1995, 1996a,b].

Piaget was principally (though not entirely) preoccupied with the ontogenesis of *causal explanation* and its *logical and empirical justification*. This was even the focus of his masterful studies of moral development, a topic that does not ordinarily lend itself to such an approach. Vygotsky, on the other hand, was principally (though not entirely) concerned with the ontogenesis of *interpretation* and *understanding*. Piaget devised methods of inquiry and a theory appropriate to analyzing how children explain and how they justify their explanations – and did it brilliantly. The price he paid, of course, was the usual price one pays for ignoring context, transactional dynamics, background knowledge, and cultural variation. To grasp how somebody interprets or understands something, which was Vygotsky's concern, requires that we take into account their cultural and linguistic background and the context in which they find themselves both 'in the small', in the sense of a particular communicative situation, and 'in the large' of a patterned cultural system. Vygotsky's emphasis, accordingly, was on situated meanings and on situated meaning-making, which inevitably generates a cultural-historical approach. The two approaches, in consequence, diverged increasingly as they matured – perhaps, some would say, to a stage of incommensurability.

I think, and I hope you agree, that we are enormously fortunate to have had two such rich theoretical accounts as an inheritance from our mentors, even if they prove to be incommensurate. Just as depth perception requires a disparity between two views of a scene, so in the human sciences the same may be true: depth demands disparity. So I conclude this excursion into the thought of these two great developmental psychologists with a salute to their profound difference. To have had either of them as a guide would have been a gift. To have had them both is stronger stuff, and even though it may at times seem overwhelming, we are the better for it.

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