Sociocultural positivism: Critical evaluation in three research vignettes

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Abstract

The paper develops a critical evaluation of sociocultural positivism by contrasting it with universal positivism, on the one hand, and with unique authorial dialogism, stemming from Bakhtin's dialogical framework, on the other hand. I will bring three research vignettes to make my analysis more grounded: on universal positivism, on sociocultural positivism, and on authorial ethical dialogism. Sociocultural positivism is not rebuked or rejected, but rather it must be limited in search for the boundary of its legitimate use and existence. A complementary framework based on Bakhtin's philosophical framework of dialogism that would deepen sociocultural positivism is proposed.

Keywords

Universal positivism, sociocultural positivism, ethical dialogism, authorial responsibility, Bakhtin

Introduction: What is sociocultural positivism in social science?

This theoretical essay is autobiographical. It is a critical reflection of my ambivalence toward a sociocultural approach: my big attraction and my big repellence to it, which I developed almost from the first day of my introduction to it. However, my initial ambivalence was impressionistic, vague, and non-analytic as I was unable to articulate it. Here, I am trying to do exactly that—to analyze my authorial ambivalence toward a sociocultural approach to social sciences.

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My attraction to a sociocultural approach has come from its profound deconstruction of our life's naturalness and universality to its core. It allowed me to see that many, if not most, of people's judgments, including my own, of and attitudes to events, practices, relationships, and the ways of our behavior and actions are not "natural," "logical," "rational," and, thus, "universal." Instead, in a sociocultural approach, these judgments and attitudes are cultural, historical, social, institutional, political, and economic artifacts. A good example of that was my friend and colleague from Salt Lake City, Utah, who visited Togo, a West African country on the Gulf of Guinea, and concluded that "the native people of Togo do not care about their kids and do not teach them anything. The kids grow like wild grass under the sky and are left to their own devices. My friend gave me a long list of what Togo adults and children do that does not, from his point of view, constitute guidance" (Matusov, 2002, p. 241). Studying culturally diverse ways of organizing guidance, I recognized that my friend equated "scaffolding" (Rogoff, 1990; Wood et al., 1976)—culturally particular guidance which is ubiquities in conventional schooling and schooled parenting—with guidance per se. Many traditional cultures organize their guidance differently than "scaffolding" (De Haan, 1999; Lave & Wenger, 1991; Rogoff, 2003). "Scaffolding" is not equal to guidance but only one, *particular*, cultural manifestation of it.

At the same time, I felt dissatisfied with a sociocultural approach. There was something cold and deadly there. I was not able to put my feelings in words until I started reading texts by Bakhtin (see the detailed autobiographical description of this dissatisfaction and my encounter with Bakhtin's text here, Matusov & Marjanovic-Shane, 2014). I realized that a sociocultural approach finalizes people, focusing on what is in common among them in some cultural group and treating them as objects of their investigation. Metaphorically speaking, it felt to me that a sociocultural approach still studies (cultural) cadavers rather than alive people.

> I became very excited, especially about [Bakhtin's] essay on [the] methodology of humanitarian sciences [in 1979]. It gave me a completely different view of science-making. It called to address people, to ask for their replies, to dialogue with people rather than to finalize them, objectify them, measure them, calculate them, label them, predict them, and sort them – as we did in Davydov's lab [a famous Russian Vygotskian developmental psychologist]. Studying Dostoevsky's novels, Bakhtin discovered that the author did not tell anything about the characters to the reader that the characters did not know about themselves. I thought that psychology should do the same with the people it studied – no talking behind people's backs. So, I remember I said to myself and my high school teachers, graduate students in educational psychology, "Well, there should be a different psychology after that." But my psychology colleagues [i.e., Davydov's graduate students and my high school teachers in 1979] were not as excited as I. They were saying that Bakhtin's texts were interesting but esoteric... I remember their advice, "You should stick with Vygotsky" (Matusov & Marjanovic-Shane, 2014, p. 12).

I jumped into a sociocultural approach more than 40 years ago. I learned it in Moscow from Soviet educational psychologist Vasilii V. Davydov, his graduate students, and

colleagues (Matusov & Marjanovic-Shane, 2014). In the Soviet Union, this approach was called "a cultural-historical approach" after Lev Vygotsky, who introduced this term. Sure, there are differences between the American sociocultural approach and the Soviet cultural-historical approach (Matusov, 2008). However, for the purpose of this essay, I will treat the term "sociocultural" broadly, including a family of approaches: a cultural-historical approach (Davydov & Moxhay, 2008; Vygotsky, 1978), a sociohistorical approach (Cole, 1988), cultural psychology (Cole, 1996), a sociocultural approach in a narrow sense (Wertsch, 1991), an activity approach (Engeström, 1987; Leontiev, 1981), a cultural-historical activity theory (aka CHAT, Engeström et al., 1999), situated cognition (Lave, 1988), cognitive apprenticeship (Rogoff, 1990), and so on. The main tenet of a sociocultural approach, in a broader sense, is that all human phenomena—memory, cognition, emotion, relationship, development—are viewed as the *particular*, rather than as the universal, *shaped* by culture, practice, activity, history, society, context, politics, economy, institutions, language, technology, discourse, and so on.

The sociocultural approach differs from and opposes a *universalist* approach to human phenomena, which views the human as a universal machine *influenced* by its environment, development, and other factors. Although the words "shaped" and "influenced" can be seen as synonyms, the difference between the sociocultural and universalist approaches is crucial. In the universalist approach, humans and their phenomena exist as such, outside the factors influencing these phenomena. For example, psychologist George Miller empirically established the limitation of human short-term memory that he formulated as Magic number 7 (plus or minus two). Most healthy adults can store between five and nine unrelated items in their short-term memory (Miller, 1956). This universal psychological Magic memory number is influenced by age and mental health.

Often, if not always, the universalist approach is reductionist: it reduces society to psychology, psychology to the brain, the brain to biology, biology to chemistry, chemistry to physics, physics to elementary particles and fields. It expects that a lower level will ultimately explain the work of a higher level. In contrast, the sociocultural approach remains essentially holistic (Matusov, 2007). The sociocultural approach does not completely reject the universal and reductionist aspects of human phenomena (Rogoff, 2003). For example, all humans need air, food, and water. All humans need two biological parents for reproduction (so far![1]). Instead, the sociocultural approach sees the universal as very thin and limited in understanding complex and rich human phenomena. The sociocultural approach does not reject universalism—rather, it often places it on the periphery of its investigation.

In the sociocultural approach, humans and their phenomena exist only within their particular sociocultural milieu. The central focus of the sociocultural investigation is *the particularities of the human being*—how and why these particularities contribute to the studied human phenomenon. The particular "sits in the middle on the continuum" (an imprecise metaphor) between the universal, on the one hand, and the unique, on the other hand. In contrast to the universal, the particular appreciates diversity within the studied human phenomenon. Thus, for example, Swedish sociocultural psychologists Roger Säljö and Jan Wyndhamn studied how Swedish high school students solved "the same" math problem of finding out the post office fare of a letter, based on its weight, in different

institutional contexts: a) during a math lesson and b) during a social study lesson (there were some other variations). The researchers found that not only the students' success rate of the problem-solving was different in the different institutional contexts but also the ways of problem-solving were different (e.g., reading off vs. calculation solutions[2]), the use of mathematical models was different, and even the students' understandings of the problems were different (Säljö & Wyndhamn, 1993). A sociocultural approach often challenges universalist claims about a human phenomenon by bringing attention to particular contexts—cultural, historical, social, political, institutional—in which these claims were obtained. At the same time, the differences among unique ways of doing and being are eliminated within "the same" cultural pattern.

Yet, I have noticed that both sociocultural and universalist approaches have something in common. Both are committed to positivism—to the study of the given. In Latin, the verb "to posit" means "to put forward" and, by implication, to throw open to critical scrutiny, to study the given—a phenomenon that exists independently of human subjectivity (Comte & Martineau, 1974). In the research practice, the positivist objectivity—the independence of the observed pattern in the phenomenon from human subjectivity—is established by a proxy of an agreement among trained researchers at the following four levels (Latour, 1987). The first level involves the so-called intercoder reliability when several trained coders code for the appearance of some predefined patterns in the data independently. Then, a statistical calculation checks if the agreement among the coders is high enough and is likely not a result of chance (Fleiss, 1981). The second level is replicability of the findings by other independent researchers using "the same" method and conditions as much as possible (Veer et al., 1994). The third level is the peer-review process in academic journals. The fourth level is the researchers' commitment to the scientific research methodology agreed upon and approved by its professional community. Of course, this series of agreements is only an imperfect proxy to the positive objectivity. Socialization to a particular research practice or research techniques in a community of practice (Lave & Wenger, 1991; Wenger, 1998), a paradigmatic tunnel vision (Kuhn, 1996), straightforward groupthink and peer pressure (Levine, 1999), external institutional pressures (Latour, 1987), political pressures (Krementsov, 1997), and career and vanity pressures may disrupt these professional intersubjective agreements from reflecting the objective positive reality and from accurate depicting the given. Contesting academic discourse of research is a crucial, but always imperfect, antidote for that (Latour, 1987).

Universal positivism claims independence of the studied phenomenon from any subjectivity as a condition for truth, making the phenomenon *universally objective*. In contrast, sociocultural positivism claims the independence of the studied phenomenon from a particular subjectivity, making the phenomenon *particularly objective*, bounded by a particular cultural[3] context. In both types of positivism, human subjectivity is viewed as *objective subjectivity* (Matusov et al., 2019a). Objective subjectivity assumes that human subjectivity is a stable object of an investigation that exists out there, independently of the researchers' subjectivity. In universal positivism, this objective subjectivity is universal, while in sociocultural positivism, it is particular. For example, in the previously considered study by Säljö and Wyndhamn, the researchers concluded, "Situated learning in

this context thus seems to imply that one establishes a frame of reference in terms of which one learns that strictly quantitative relationships are often not suitable to have as working algorithms in everyday settings such as the one of establishing postage rates" (Säljö & Wyndhamn, 1993, p. 338). This raises a controversy of whether some of the students' "reading off" solutions, not involving calculations, were mathematical in nature regardless the correctness of their answer. Some schoolteachers and scholars might not recognize the reading-off reasoning as a legitimate mathematical solution. According to a sociocultural approach, human perception—for example, what is or what is not a *mathematical* solution—is bounded by and rooted in particular sociocultural contexts and the subject of sociocultural interpretation. Thus, any agreement among researchers is a sociocultural phenomenon in itself.

Positivism views people (and human phenomena) as mutually replaceable and, thus, potentially countable. Universal positivism views *all people* as mutually replaceable. Thus, for example, Miller's law of memory of Magic number 7 (plus or minus two) is applicable for all healthy adults. Sociocultural positivism views people as mutually replaceable within the studied *particular* cultural phenomenon. Thus, in Säljö and Wyndhamn's study, the students in a condition of one cultural practice of, let's say, a math lesson in a conventional school during a math class were viewed as "the same." These students were also "the same"—that is, mutually replaceable—during a social studies lesson while solving the postage problem. However, these two "samenesses" were different from each other because of their different cultural institutional contexts. This is what I refer to the phenomenon of "sociocultural positivism." Sociocultural positivism treats people as "the same" within "one" cultural context and as "different" across "different" cultural contexts. In contrast, universal positivism treats all people as "the same" across contexts, influenced by diverse factors.

In the rest of the paper, I will continue to develop my critical evaluation of sociocultural positivism by contrasting it with universal positivism, on the one hand, and with unique authorial dialogism, stemming from Bakhtin's dialogical framework, on the other hand. I will bring three research vignettes to make my analysis more grounded: a vignette on universal positivism, a vignette on sociocultural positivism (my own part research), and a vignette on ethical dialogism. I found myself not rebuking or rejecting sociocultural positivism (or even universal positivism) but rather limiting it to find the boundary of its legitimate use and existence while also developing an alternative to it guided by Bakhtin's philosophical framework of dialogism.

Vignette on the universal positivism: Severe limitations of the poietic individual mind

Daniel Kahneman,[4] an Israeli cognitivist[5] psychologist and a Nobel Prize winner in economic science in 2002, delivers bad news for humanity. Our individual human mind makes very poor judgments. Not only we are cognitively deficient, but also we are unaware of these deficiencies. Even more, we rarely change our judgments even when we have learned about these deficiencies. According to Kahneman, who worked closely with another famous American cognitive psychologist Amos Tversky, our individual mind

consists of two systems. System#1 involves a mostly invisible intuitive inductive un-critical mind based on pattern recognition, association making, making consistent, co-herent stories, simplifications, and so on. System#2 involves mostly deductive, logical, deliberate, reason- and argument-based, critical, calculating rational mind. Through various clever lab and natural experiments and personal stories, Kahneman convincingly demonstrates in his book "Thinking, fast and slow" (Kahneman, 2013) how often the quick System#1 makes judgments and decisions instead of the slow System#2. But even when System#2 is activated, more often than not, it uncritically swallows the data provided by System#1. In itself, feeding the logical machine (System#2) by the raw data (System#1) may not have been necessarily bad if only System#1 had been accurate and smart—the problem is that it is often not the case, according to the intensive empirical evidence provided by Kahneman. People's mind is much less self-conscious about their own work, less rational, and more susceptive to fallacies and manipulation.

Let me share a few of my favorite powerful examples from Kahneman's book. The most striking evidence for me of how System#1 tacitly guides our behavior is a case of the so-called "priming" phenomenon. The psychologist John Bargh and his collaborators (Bargh et al., 1996) asked undergraduate 18- to 22-year-old students at New York University to assemble sentences from a set of five given words. In the experimental group of the students, the word sets included words associated with the elderly such as "Florida," "forgetful," "bald," "gray," or "wrinkle." The control group did not have words associated with the elderly. After this task, the research participants were asked to go down the hall to continue the experiments. However, the true focus of the researchers was on measuring the time for the participants to get across the hall. The young participants from the experimental group walked significantly slower through the hall than the similarly young participants from the control group. Kahneman explains that first, System#1 tacitly triggered thoughts and associations about old ages, which then primed a behavior, walking slowly, which is associated with old age. Both stages of the priming occur without any awareness of the participants. Interestingly, as the cognitive researchers showed, the effect can be reversed if the participants developed a negative attitude toward the elderly—they would walk faster than the control group. The tacit System#1 can be easily manipulated exactly because its work is not under the control of the actor. Priming is an objective feature of human subjectivity.

My other favorite case about the faulty System#1 involves the author's experiments about a fictitious lady named Linda, "Linda is 31 years old, single, outspoken, and very bright. She majored in philosophy. As a student, she was deeply concerned with issues of discrimination and social justice, and also participated in antinuclear demonstrations" (Kahneman, 2013, p. 156). Graduate students were presented with the question, what is more probably: Linda is a bank teller, or Linda is a bank teller who actively participates in the feminist movement. Ninety percent of the research participants chose the latter answer, despite the "obvious" fact that active feminist bank tellers are a subset of the total bank tellers' pool. A subset of a pool automatically reduces the probability, regardless of a description of a particular case. Kahneman argues that in many people, the fast institutive System#1 tacitly replaces the presented question about probability with a question about representativeness: based on Linda's description, she better matches to an active feminist, who happens to be a bank teller,

than to a generic bank teller. As Kahneman convincingly demonstrates, System#1 is notoriously bad about probabilistic judgments. In contrast to visual illusions, awareness of the cognitive fallacies caused by System#1 does not necessarily help to correct them. It may take a person to participate in a special effortful social discourse awakening System#2 to correct this fallacy in a given moment, but this awakening is usually very temporary. The set of these cognitive fallacies is yet another *objective* feature of human subjectivity.

So, what should we do to address cognitive fallacies caused by the fast, intuitive, tacit System#1 that often lets us jump to wrong conclusions? As Kahneman points out and powerfully demonstrates with empirical evidence, the mere awareness of these fallacies is not always helpful outside of a particular moment of awakening System#2 after which it becomes dormant again. The author proposes using special formal procedures and/or replacing human judgments with objective formulae. For example, Kahneman recommends employers, who seek to hire new employees, to develop no more than 6 independent factors that define the success of the job, operationalize each of these factors with 2–3 interview questions, and rate each job candidate on the questions using a 5-point scale, trying to make sure that rating on one question does not influence rating on another question. Then, a simple formula should be developed, adding all the rates that will allow ranking the candidates. The employer must stick to the result of the ranking, resisting any temptations to use their holistic judgment because the latter will be shaped by the cognitive and perceptual fallacies by System#1. The author goes even so far as to suggest that simple formula of the frequency of sexual intercourse minus the frequency of marital disputes can predict more accurately the marriage stability or divorce rather than any clinical judgment by a marital expert. He believes that the increasing proliferation of the objective formulae based on research evidence (i.e., "evidence/research-based practice") will improve the social practices by eliminating the subjective human judgment based on cognitive fallacies of System#1 and, thus, will make possible a victory of System#2 (rational, objective calculation) over System#1 (pattern recognition).

To the author's credit, he provides self-criticism to his cognitivist research and argumentation, based on universal positivism. He admits that his research focuses on the documentation of cognitive flaws rather than also of successes of System#1, which might have skewed his conclusions. Also, the author admits that he has been predominately interested in human judgments involving so-called "low-validity practices." Low-validity practices involve a high degree of probability and/or lack of any regularity rule. Kahneman's research collaboration with Gary Klein, another renowned cognitivist psychologist and a scholarly opponent of Kahneman, helps to explore the limitations of Kahneman's research, argumentation, and conclusions. Klein has found System#1 to be much more powerful, successful, and useful. In contrast to Kahneman, Klein has studied human intuitive expert judgments in high-validity social practices with immediate feedback and high deterministic regularities like firefighting or chess playing. Kahneman agrees that in these "high-validity practices," a human intuitive expert judgment, based on pattern recognition, grounded in the participant's extensive experience, can be very accurate and valuable. However, like chess-playing shows, smart computers (and intelligent programs) can outsmart human pattern recognition and, thus, the human intuitive expert judgment.

Throughout his book, Daniel Kahneman discusses the hostile reception of his universal positivist research, argumentation, and conclusions from many social scientists and humanities scholars. He points out that, in part, this hostility comes from our System#2, which has difficulty coming to terms that it is not always or even not much in the driving seat of the mind. Many critics accuse Kahneman of being mechanical, rigid, non-contextual, and so on. In my authorial judgment (NB!), this critique is both unfair and fair. It is unfair because I agree with cognitivist psychologist Kahneman that: 1) our mind can and often does function like a smart machine based on pattern recognition, 2) it has limitations and flaws, and 3) it is worth studying. Recent exciting advances in smart machines based on pattern recognition, complexity, and self-organization—such as chess-playing, voice recognition, writing recognition, self-driving cars, and so on—have left no doubt smart machines can outperform human intuitive and rational expert judgment (Matusov, 2020c). Furthermore, I agree with Kahneman that when performed better than humans, formulae and smart machines should replace human intuitive expert judgment whenever possible. My argument, in agreement with Kahneman, is based not only on effectiveness, accuracy, fallacy-free, and efficiency, as Kahneman convincingly argues, but also on a moral argument that this labor and work (cf. Arendt, 1958) may not necessarily be human endeavor in the first place (Matusov, 2020b).

This brings me to my critique of Kahneman. I argue that his mechanistic vision of the human mind is based on mechanistic practices (both low and high validity social practices he considered), in which this human mind operates. Aristotle named these mechanistic practices "poïesis." In *poiesis*, the goal, the definition of success, and the definition of the quality of the activity pre-exist and are predefined explicitly or implicitly before the activity takes place. In contrast to *poïesis*, there is "praxis," defined by Aristotle as practice in which the goal, the definition of success, the definition of the problem, and the definition of the quality (i.e., values) emerge from and are negotiated in practice itself (Aristotle & Crisp, 2000). Cognitivist psychologists usually do not study people's subjectivities in *praxis*, when the goals and the quality of the activity do not pre-exist the activity itself but rather emerge and are creatively defined by the participants in the activity itself. I argue that many cognitivist psychologists like Kahneman, Tversky, and Klein have studied the mind in *poietic* practices. It is no surprise that in many (if not all!) Kahneman's examples and experiments, the goal, success, and quality of the activities were predefined or could be predefined in advance. If this is the case, I believe that in *poiesis*-like practices, the human mind can be viewed as an imperfect smart machine, can be modeled by a smart machine, can be improved by a better formula or smart machine, and, thus, can be legitimately replaced by a smart machine as more accurate, reliable, effective, and efficient, regardless of how upsetting it may sound for us, humans. This is the legitimate realm of universal positivist research. Now, let me turn to a vignette on sociocultural positivism and find its legitimacy boundary.

Vignette on the sociocultural positivism: Schooling as a cultural process

Together with a then-postdoc, Nancy Bell, and my then-doctoral advisor Professor Barbara Rogoff, I conducted sociocultural research in Salt Lake City School District,

Utah, in 1991 as a part of my Master's Thesis (Matusov et al., 2002). The purpose of the research was to test a plausible hypothesis that schooling is a cultural, rather than technological, process of socialization of children/students into particular cultural practices and values of how people work together and provide guidance. For this purpose, we selected two public schools with distinct educational philosophies and practices of schooling. One school was a progressive mixed-grade public K-6 school that, according to our participatory observations (Baker-Sennett et al., 1992), promoted collaboration and collaborative guidance among children and between adults—teachers and parent volunteers—and children (Matusov & Rogoff, 2002; Rogoff, Bartlett, & Goodman Turkanis, 2001). The other school was a conventional public elementary school that, according to our observations, often prohibited students informally helping or even speaking with each other without teacher permission (often considered "cheating"); used a lot of the format of "quizzing" in which the teacher asks a known-answer question, a student responds with a simple answer, and the teacher evaluates the correctness of the answer; and incorporated predominately direct instruction in which teachers asked children to produce actions without explaining their meaning or providing a rationale for the requests. We wondered whether we could recognize which school the participants were from by observing their ways of working together and organizing guidance.

The study focused on finding and examining cultural functional-structural patterns of joint activities and guidance:

> Consistent with sociocultural methods, we examined *patterns* of differences and similarities rather than attempting to isolate variables (such as school affiliation or a particular practice within the schools) responsible for the observed patterns. We treated the children's school affiliation as a sort of cultural participation; cultural differences generally involve a constellation of connected practices (see Rogoff et al., 1993, for research strategies for examining cultural patterns). We aimed to shed light on patterns that may function differently in communities that vary in numerous and structured ways; there are many differences in the two schools' philosophies and classroom structure besides the prevalence of collaboration or traditional instructional discourse patterns (Matusov et al., 2002, p. 133, the italics original).

We enrolled 12 pairs of children from each school. The pair consisted of one third-grader (3G) and one fourth-grader (4G) of the same gender. The ethnic and SES composition of the children was comparable in both schools. We presented each pair with five tasks: one card sorting puzzle, 3 math problems modified from fourth-grade math texts, and one magnet problem.[6] The experimenter (I) "asked the fourth-grader to help the third-grader learn how to solve the problems, 'since you're in fourth grade'" (Matusov et al., 2002, p. 137). We videotaped the sessions and analyzed them by abstracting and coding diverse structural-functional patterns of working together and guidance. We checked the intercoder (interrater) reliability of the coding, using two coders blind to our hypothesis and school differences. "Interrater reliability of occurrence of the approaches to working together and to guidance yielded Cohen's kappa values ranging from 0.74 to 0.88 (except for the variable of fourth-graders directing actions without providing any rationale, which almost never occurred). Kappa values in

this range reflect good to excellent levels of agreement (Fleiss, 1981)" (p. 142). We used ANOVAs statistical analyses. The results of the study are represented in the two following tables:

In the article, we provided qualitative examples and contrasting cases from two schools illustrating the *types* of working together and guidance. Let me provide one such an example of the contrasting cases:

Traditional school

4G examined the cards to determine the next pair for herself in advance of asking 3G to find the pair, "And then, let's see…" After 4G found the pair, her quizzing continued. She gave 3G the hair blowdryer card, "What goes with this?" While 3G was thinking of what goes with a blowdryer, 4G turned the razor card to look at it. 3G seemed to take this as a prompt, picked the razor card, and replied, "This! Because they're both used in the bathroom." 4G approved, "OK," but with some reservation in her voice as she looked at the rest of the cards carefully, saying "Um, let's see." 3G picked up 4G's uncertainty and said, "No, wait," and put the razor card back down. Now 4G deviated from her quizzing with uncertainty about the grouping; she paused to solve the grouping for herself and then gave the answer to 3G by taking the towel card, showing it to 3G, and saying, "I think it's this one because you use towels when you use the hairblower." 3G enthusiastically agreed with 4G, "Uh huh!" and took the card, putting it with the blowdryer in the growing collection of pairs of cards beside her (Matusov et al., 2002, p. 144, the italics original).

Collaborative school

After 4G placed the 18 cards one by one on the table and asked the researcher several clarification questions about the goal of the task (to which the researcher replied, "Do what you think best"), 4G turned to 3G, who was watching closely. 4G said "So, we can put them into different categories. ... OK, so… like we would have… (picking up cards) scissors, scissors, and maybe razor, because they're all "sharp" or something… and maybe the knife." 3G nodded enthusiastically and said collegially, "Okay. That's good." So 4G put those four cards aside, "OK. … This is the 'sharp' category," specifying the category rationale 3G and modeling the process during selection of this first group.

Meanwhile, 3G pitched in and began the second group, following the same process. With 4G watching closely, 3G picked up cards and put them into a pile, "Hairdryer… Hmmm… Toothbrush… And what else goes into bathrooms?" 4G was looking for an appropriate card when 3G answered herself with enthusiasm, "Towels go into the bathroom!" She put the towel card into the pile and turned to 4G, who replied, "Yeah" (Matusov et al., 2002, p. 145, the italics original).

We found that despite some similarities, the children from the two philosophically different schools exhibit culturally different patterns of working together and guidance. Children from the progressive, collaborative school exhibited more working together through "a transactional dialogue," when "children together examined the problem and possible solutions, building a new understanding collectively" (p. 140). They also

demonstrated more "instruction embedded in collaboration" when "guidance was offered during the process of collaborative solution" (p. 141). In contrast, children from the conventional school showed more of the "quizzing" type of guidance when the fourth-grader asked known-answer questions the third grader. Also, the children from the two different schools had different cultural beliefs about guidance. Thus, most of the children from the traditional school believed that in order to provide guidance, the teacher must know how to solve the guiding problem in advance. In contrast, many children from the progressive, collaborative school believed that guidance is possible even when the teacher does not know how to solve the guiding problem in advance—the guidance can occur through the teacher's co-learning with the student. We concluded that schools are cultural institutions that do not only teach academic subjects but also particular cultural ways of working together and guidance. The school institutions seem to shape their participants' practices and beliefs.

Like universal positivism, sociocultural positivism focuses on studying *typicalities* and *objective* subjectivities: typical distinct *structural-functional patterns* of the research participants' behavior, activity, beliefs, attitudes, activity systems, networks, and so on. Both kinds of positivism try to finalize and objectivize the research participants and eliminate the researchers' subjectivity from the research phenomena—in the study above, we used the intercoder reliability check for that. We implied that any trained person could see the structural-functional what we saw. Both positivisms study the given—existing out-there, independently of any subjectivity.

However, in contrast to universal positivism, sociocultural positivism is interested in cultural particularities that shape human subjectivity. In the study above, this cultural particularity seemed to have an institutional origin. The research participants were treated as "the same" within each particular institutional setting and "different" across these two institutional settings. According to a main founder of the sociocultural paradigm, Lev Vygotsky, culture is constituted by its particular mediational tools and signs (Vygotsky, 1978).

This juxtaposition of sociocultural particularity and independence from human subjectivity, insisted by positivism, represents a tension within the sociocultural positivism that jeopardizes either socioculturalism (particularism) or positivism itself. In our study above, although it was rather apparent that the researchers' sympathy lay with the collaborative values and practices, we argued in the article that these cultural patterns were equally valuable within the diverse communities supporting these educational institutions (Matusov et al., 2002, pp. 151–154). The researchers (we) also noticed that the presented experiments, when the experimenter (I) was giving a problem to the children without being involved in solving it, themselves were biased toward the traditional institutional schooling. Hence, neither the ways of sociocultural research investigation nor the researchers themselves are indifferent to the studied sociocultural phenomenon, which may affect the results of the research and as a consequence. For example, as the scholarly debates about the so-called "problem of transfer"—students learning a skill or a concept in one context or domain might not "transfer" to another context or domain or mis-transfer it—in psychology and education have shown, different paradigm-cultural research communities might do a different type of research, which findings might not be easy, or

even at all, accepted by the opposing paradigm (Anderson et al., 1996, 1997; Greeno, 1997). The admission of this fact contradicts the major premise of positivism about the findings being totally independent of the human subjectivity of the researchers.

The problem seems to be that the structural-functional patterns studied by sociocultural positivist research, like I presented above, induce different meanings and senses in different cultural—paradigmatic, institutional, and otherwise—communities. Meaning involves a dialogic relationship circulating in particular communities and among unique people (Bakhtin, 1986, 1999; Matusov, 2015a, 2020c). Positivism is not equipped to study ephemeral meaning, which it tries to reduce to tangible, structural-functional patterns to be coded in research (e.g., see these codes in Tables 1 and 2 above). Sociocultural positivism faces the dilemma of either increasingly objectivize the studied meaning at risk of killing any traces of the *sociocultural*, particular subjectivity or increasingly subjectify the studied meaning at risk of losing its objectivity—that is, scientific (aka positivistic) rigor. However, like universal positivism, sociocultural positivistic research is also not equipped to study the human authorial agency and human uniqueness per se, as the following vignette will show. To study human uniqueness and authorship requires a paradigmatic shift away from positivism.

Vignette on the ethical dialogism: Authorial responsibility

While highly appreciating Kahneman's innovative research approaches to study the human mind and important,[7] consequential findings based on universal positivism, I

Table 1. Mean number of the four problems (and standard deviations) employing each category of working together more than minimally (p. 146).

Approach to working together	Collaborative school	Traditional school	F (1, 22)
Nonshared decisions	1.08 (1.00)	.75 (.97)	0.7
Unilateral decisions	.66 (1.23)	.83 (.94)	0.1
Specialized working together	3.17 (1.03)	3.17 (1.19)	0
Flexible working together	.25 (.45)	.33 (.49)	0.2
Transactional dialogue	1.58 (1.08)	.67 (.78)	5.7, $p < .05$

Table 2. Mean number of the four problems (and standard deviations) employing each category of guidance more than minimally (p. 147).

Approach to guidance	Collaborative school	Traditional school	F (1, 22)
Quizzing	.83 (1.19)	2.00 (1.41)	4.8, $p < .05$
Pure instruction	1.00 (1.35)	1.08 (1.16)	0
Instruction embedded in collaboration	1.00 (1.04)	.17 (.39)	6.7, $p < .05$

argue that human nature cannot be reduced to predictable outcomes/patterns of behavior, judgment, and action. Boesch argued that the "main trait of human reality is to transcend itself" (1993, p. 15). This suggests that human nature reveals itself not when human behavior, action, and judgment are governed by the pattern recognition processes or rational, objective calculations, so nicely studied and described by Kahneman (2013) as System#1 and System#2 correspondingly, or by some particular sociocultural-historical mediators (Vygotsky, 1978), but when humans actively, agently, authorially transcend these systems and their dynamics, using these systems as the building material for this transcendence.[8] Russian educationalist Alexander Lobok criticizes conventional psychology for its primary focus on typicality—*universal* typicality. The same reproach can be applied to the sociocultural psychology that is also primarily interested in typicality—this time, *particular* typicality or uniformity.

> For an "objective" [positivist] external onlooker, the childhood of different children is largely indistinguishable. All children[9] play certain games, absorbedly listen to fairytales, react to various events, and so on. In fact, nearly all modern psychology research testifies to these "childhood uniformities" and their typologies. The reason for this supposed uniformity is a flaw in the main approach of modern psychology. Modern psychology often focuses on universal, generalizable, predictable, and regular principles, which is the standard of science. Anything else is viewed as non-scientific. How else it can be?! [Lobok uses irony with this rhetorical question.]

> The problem with this conventional approach to psychology, however, is that the human being is the only "object" in the Universe that is defined by a *subjective cognizing world* [orig. emphasis] of [their] own, building above the subjective lived experiences and feelings and redefining them — a world, unique for each person, which cannot possibly be viewed from outside, except for some of its outward objective artifact manifestations of this subjective cognizing world. If so, a question emerges: can a particular human being, [their] particular and unique subjective cognizing world be a subject of science — a subject of scientific observation and interpretation? Can a particular child with his unique subjective world, subjective Cosmos, not overlapping with subjective cognizing worlds of all other people in principle, be a subject of science?

> Thus, for a [dialogic] researcher, it would appear strange to avoid addressing this individually subjective [unique] world since it is exactly the disparities of people's inner subjective experiences that, in all likelihood, make up our essence as humans. It is not what a person has in common with other people that makes [them] become a *unique* personality [orig. emphasis]. On the contrary, what makes one a genuine person is precisely what [they] by no means shares with the others. I strongly argue that the phenomenon of childhood is not defined by those things that make children of a certain age group category look mostly alike. Childhood, rather, is made of a diversity of children's views, experiences, and fantasies that are *unique* for each person and different from anyone else's experiences. Probably, this non-overlapping of human subjectivities is the deepest and the most important enigma [our emphasis] of human beings (Lobok, 2017, p. SIa:2).

… [A]s an educator, I will deal not just with the behavior of the child, but with a mystery of the child. I would know that any child has a mystery. Any genuine educator knows firmly that any child is a mystery. And this mystery will never be fully revealed and deciphered. And this is great. Similarly, I cannot decipher a mystery of a woman I love — that's also good. God save us from living in a world of fully deciphered people! We don't want to live in a world where other people's consciousnesses are [fully] transparent and decoded to us — that would be the end of the world. The essence of a human is in that the human is always more than what we understand about [them], and it's always true, regardless of the age of the person. When developmental psychology textbooks in all their totality describe a one- or two-year-old toddler, they actually do not describe anything important about the child (Lobok, 2014, translation from Russian is mine) (cited in Matusov, 2015a, p. 400).

Thus, patternless, unique outliers, rather than only statistically significant patterns, should also be studied to reveal this transcending essence of human nature (Gladwell, 2008). The outliers often creatively redefine the situation, the purpose of the activity, the normative relations in which they find themselves, transforming the *poïesis* of the psychological experiments into *praxis*. Rather than considering them as "statistical noise," by surprising the observers and other participants, unique outliers represent the essence of the human nature.

What emerges here is the issue of the desirability of a unique, authorial transcendence of the given—that is, the question of authorial judgment. In other words, should we and how can we, for example, educators, promote a person's authorial judgment, becoming responsible—that is, answerable to other people and the actor him/herself, rather than only promoting one's ability to subordinate their System#1 (pattern recognition) to System#2 (rational, objective calculation) or to the sociocultural mediators? The question of promoting domination of System#2 thinking over System#1 was asked by the universal and sociocultural positivist researchers and educators. Ethical dialogism, however, focuses on, asks for, and promotes a personal authorial, responsible judgment. The authorial responsible judgment does not annihilate, nor does it put aside System#1 and System#2—pattern recognition and rational calculations—and sociocultural-historical mediators, but it rather uses them as the material for the authorial transcendence. Ethical dualism is an unapologetically *dualistic,* positivism–dialogism, philosophical position rooted in the radical pluralism of unreconcilable and conflicting values described by Russian-Jewish-British philosopher Isaiah Berlin (Kelly, 1978). This is especially important in education. Let's consider the following example involving an authorial judgment and treating the participants as unique persons.

Matusov (2015b, 2017) describes a case in which an educator named in his articles as Mr. Jim faced a crucial educational dilemma. Mr. Jim worked in an afterschool program with Latinx children at a local Latin-American Center in the US in the early 2000s. He organized an activity in which 7- to 14-year-old children had an opportunity to create their "digital stories." Mr. Jim got two expensive digital cameras from a local state university that the children, who wanted to participate in the activity, could borrow to shoot a video of their choice for a day or two. Then, they edited their raw footage and added narration and music through Mr. Jim's guidance and peer mutual help. Using Microsoft FrontPage

and JavaScript, Mr. Jim designed an online prototype of YouTube (it was before video sharing was available on the Internet), where the Center's children, staff, and parents could rate the children's videos and make comments on them. Since more children wanted to participate in the activity than the cameras, Mr. Jim developed a waiting list.

Pedro, a 12-year-old Mexican boy, signed for the activity. Pedro had a very negative reputation at the Center. He was known to the Center children and staff as a thief. He was caught twice by the police for shoplifting and was suspected of stealing a cellular phone from the Center. He had countless suspensions and detentions from his school, and he also had problems with his behavior at the Center. Many children at the Center did not like him because of his stealing, involving in fights, and being somewhat physically clumsy.

When his turn came to borrow an expensive digital camera, not only the Center staff but also many children objected because they were sure that Pedro would simply steal the $1000-worth camera. Pedro also expected that he would not get the camera. He started his preemptive objection by arguing in whining and increasingly aggressive tone.

To the surprise of all, Mr. Jim offered a camera to Pedro. Pedro could not believe what had happened and tried to make sense of it. He asked Mr. Jim if he had many cameras. Mr. Jim said that he had only two. Pedro asked how expensive the cameras were. Mr. Jim replied that each cost about $1000. Pedro asked what would happen if a camera disappeared. Mr. Jim explained that the Center would be a less exciting place. The university would probably stop giving money to support the Center's exciting activities. Then Pedro asked Mr. Jim directly why he was trusting the expensive digital camera to him. Mr. Jim replied because he, Pedro, was next and because he wanted to make a digital story. Pedro took the camera.

The children who were listening to this exchange told Mr. Jim that he had made a mistake because Pedro had been known as a thief—he would not return the camera. They even called a computer instructor at the Center, Mr. David, who also tried to convince Mr. Jim that he was making a big mistake. Mr. David listed many cases of Pedro's past lying, stealing, and fights and many "second chances" given to him by the Center's staff that Pedro violated. Mr. Jim thanked the children and Mr. David for sharing their concerns and providing their advice. However, he told them that, in his view, it was important to give Pedro an opportunity to work on his digital stories—it was Pedro's turn to take the camera to his home. All these exchanges occurred in the presence of Pedro.

Pedro was suspended from the Center for a fight for a few days the next day. Day after, he asked his father, who had three jobs, to come to the Center after his third job to return the camera on time. Pedro's digital story about his drug-infested neighborhood was the winner—it had the highest rating on the video-sharing site designed by Mr. Jim.

In an argument with Mr. Jim, Mr. David provided a very good rational, evidence-based argument guided by System#1 and System#2 of why Pedro should not be trusted with an expensive digital camera. The risk was high. Mr. Jim did not have much rational, objective, evidence-based counterargument to offer. It was not a case that Mr. Jim had known something about Pedro that Mr. David or the rest of the community had not known. It was not a case that Mr. Jim calculated Pedro better than the rest (Bakhtin, 1999), foreseeing that his trusting defenseless offer of the expensive camera would

transform Pedro's vile nature through this random act of kindness. No. Although Mr. Jim was very glad that Pedro returned the expensive camera back and won the digital story competition with his brilliant socially charged video, it was not his goal either. What was it?

A teacher cannot guarantee a student's actions and make a student predictably good. Psychological calculations and manipulative channeling people into desired behavior never work 100%. But even more, I argue it is not desirable to rob people of their moral choices. I see that the biggest issue here is not whether or not Pedro would return the camera in some predictable manner to Mr. Jim. Not even about Pedro's miraculous transformation to a better person. Rather, it is about Mr. Jim reaching Pedro and engaging him in dialogue about responsibility. I think that this process happened in this case, but it does not guarantee to happen in another case.

Later, in continuing conversations between Mr. David and Mr. Jim, Mr. David interpreted Pedro's questions to Mr. Jim as his probing for stealing a camera—could he, Pedro, easily get away with stealing the camera? I respectfully disagree with Mr. David's judgment because I think that Pedro tried to make sense of why Mr. Jim was going to give him the camera despite what Mr. Jim knew about him. It was not "a second chance" or "the last chance." It was not a pedagogical strategy-action, in which Pedro was an object of this action. Rather, in my view, it was Mr. Jim's proposal to break with the predictable history of Pedro's distrustful and exploitative relations with other people. It was Mr. Jim's offer for a new and, arguably, better reality for all. In my analysis, Mr. Jim initiated discourse on responsibility with Pedro, as "the consciousnesses with the equal rights" (Bakhtin, 1999, p. 6). Nothing is hidden from Pedro by Mr. Jim. Each of Pedro's questions was treated by Mr. Jim seriously and honestly as "the final questions" (cf. Bakhtin, 1999). Mr. Jim was in an event with Pedro. All of Mr. Jim's replies were exhaustively directed to Pedro (to *You*) without attempting to secretly "wink" to any third addressee invisible to Pedro.[10] Would it have been different if Mr. Jim had tried to act on Pedro manipulating him into being good? I think Pedro, who, in my view, had been rather savvy and sensitive to these manipulations by adults in authority by that time already, would have cracked the meaning of such manipulation and would have powerfully resisted it (for more discussion of this phenomena, see Frankl (2000) and Neill (1960)—these sources discuss similar cases and provide in-depth analysis of them). Their conversation constituted an event—a disjuncture with the past.

In Mr. Jim's arguably dialogic pedagogy of possibilities and hope, the pedagogical goal was not to make Pedro good and/or to make Pedro behave how Mr. Jim wanted him to behave, which is often a goal of traditional and progressive educators. Rather, I think Mr. Jim treated and addressed Pedro and himself as an imperfectly good person. This means that people are striving to be good while being involved in diverse, and at times contradictory, obligations to other people and to their own, self-serving and collective interests, desires, and survival and self-actualization needs. Sometimes people live up to their aspirations to be good, but sometimes they (i.e., we) do not. Although the ontological circumstances that the boy Pedro and the adult Mr. Jim had faced might have been very different, their existential problem of navigation of their life while striving for being good remains similar. That is why a meeting of two consciousnesses with equal rights,

interested in each other is always possible (but still is not guaranteed). "Being good" does not have a universal, value-free, outside of the "here-and-now-with-these-people" context definition based on the Kantian, rule-based, universal morality with its non-participatory bird's-eye view from above (Smith, 2010). Instead, "being good" has to be contextual, risky (i.e., never fully guaranteed), contested, and participatively judged and defined each time from scratch by the direct and remote diverse participants, who are biased by striving to be good in diverse ways (Bakhtin, 1993). The bias of goodness is not just cultural but deeply personal and unique, defining who the person of this unique deed is. Only this bias, in my view, can push us to what Positivists often refer to as "the objectivity," namely, the (never fully reachable) ideals of justice, fairness, harmony with the world, truth, and peace.

One might ask what this ontological dialogic instruction, presented by Mr. Jim, looks like for other academic curricula like math, language art, science, and so on. Elsewhere (Matusov, 2009), I have provided such descriptions and their analysis. The goal of ontological dialogic education is not to shape students' skills, attitudes, knowledge, and perception in some curricular endpoints preset and known in advance by the teacher, but rather to engage the students in historically unfolding (critical) discourses about targeted practices, values, and involving issues, to address the students and evoke their questions and replies, to inform about influential positions and voices, to promote the students' own voices on the subject matter, and to face them with issues of their personal responsibility and engage them in consequential decision making. The teacher's knowledge (partially) collapses with ignorant students: both the teacher and the students are ignorant and knowledgeable, exploring the boundaries of their knowledge and ignorance in their critical dialogue. Thus, from this Bakhtinian perspective, education is dialogic and ontological. This education cannot make students good or even correct, but it can make the students more informed, critical, and responsible ("participative," using Bakhtin, 1993 term). What sense and position the students would take out of this informing, how critical and responsible they would become, is up to the students' own agency, authorship, and conscience.

At the time, during the events, Mr. Jim did not know what the goal of his trusting offer to Pedro was. It took several years for him to fully realize and articulate it. Mr. Jim has realized that he wanted to disrupt the toxic careless environment and predictable dysfunctional social relations in which Pedro had been trapped back then in order to create a space for Pedro's authorial responsible action (and judgment). This authorial responsible action might or might not involve returning the camera. For example, Pedro might have decided to sell it in order to buy medicine and toys for his sick younger brother, unilaterally prioritizing the acute needs of his family over the educational and entertaining needs of the Center. This arguably could also have been an authorial responsible action, but its responsibility unilaterally prioritizing family over the Community Center would have been contested. The dialogue, initiated by Pedro between Pedro and Mr. Jim about the meaning of his action was very important for creating this space for authorial responsible action because, with a high probability, this dialogue continued for Pedro internally and externally, perhaps, in his family. Citing famous German poet of the XIX century Goethe, Viktor Frankl argued,

> If we take man as he is [i.e., the given, the object of the positivist study], we make him worse, but if we take man as he should be, we make him capable of becoming what he can be … So if you don't recognize a young man's will to meaning, man's search for meaning, you make him worse: you make him dull, you make him frustrated. While if you presuppose in this man, there must be a spark for meaning. Let's presuppose it and then you will elicit it from him, you will make him capable of becoming what he in principle is capable of becoming (from Frankl's speech, 'Why to believe in others',1972[11]).

Of course, the "we" who define whom a person "should be" must include the person themselves.

Again, the issue is not to calculate Pedro into a desirable action or an attitude, but rather to create an opportunity for a human-to-human encounter to occur (Bakhtin, 1999; Buber, 2000),

> The encounter/meeting is the ultimate opportunity to hear yourself in the other. This other can be a physical interlocutor, or it can be an encounter with a text or with some phenomenon of culture, which forces me to make that very effort. The encounter/meeting, which I am talking about, is that what presupposes my great effort to encounter the other who is not overlapping with me (i.e., opaque to me) but who is interesting for me. [This meeting generates] a point of puzzlement/surprise, and at the same time it is a point of some kind of unusual joy of discovery of myself in the [other] unexpected for me. This is as if [the other] talks about something that is deeply intuitively clear to me. And at the same time, [the other] creates the space, in which these deep intuitions of mine begin to live and begin the fireworks of my own creative thinking … [The other] capture[s]/hook[s] something in me, which is essential about me. To "capture/hook" something in me, means to provoke, spark, self-actualize, and initiate some kind of my own activity. And this situation of the encounter/meeting that I am describing here is, as a matter of fact, an educational situation. Genuine education unavoidably involves an element of provocation.

> What is important for me, as a teacher, is that my encounter with the students is the space of my own personal self-growth, my own self-actualization. The encounter with my students is the process of my own self-making/self-creation/self-becoming and, thus, my own self-education (originally in Lobok, 2014; cited in Matusov & Marjanovic-Shane, 2015, p. 216).

In the case of Mr. Jim and Pedro, this dialogic encounter occurred, making both of them outliers of the given past relations. However, this deep eventful encounter with the dialogically important other is not and never can be guaranteed. Arguably, the purpose of education (among some others) is to create possibilities for such human-to-human dialogic encounters. An educator, or anybody else, cannot design a genuine person-to-person encounter but only favorable conditions for it.

Kahneman (and all positivists in general) can be wrong in totalizing his universal positivist approach because he equates the human mind-in- *poïesis*—mind in the given, that is, "taking man as he is" (cf. Frankel's quote above), with the human per se. However, I argue that the human mind in *praxis*-like practices, where goals, problems, values,

successes, qualities emerge, are defined by and negotiated with the immediate and remote participants, may not be studied and approached in the same way Kahneman has studied and approached mind-in-*poïesis*. An observed phenomenon of the human mind in *praxis* does not exist independently of the observer, who is just another participant in the *praxis* of defining and negotiating of the goals, values, problems, and so on (this is just one of many reasons, see other reasons here: Matusov & Marjanovic-Shane, 2016). For example, a judgment of pedagogical success is always contested and in the eye of the beholder. Thus, Sigmund Ongstad (2007, January) presented an interesting, but sad, story illustrating how the mainstream school does not appreciate and care about students engaging in Big Dialogue about ideas and testing limits of knowledge, if not actively discourages them,

> The following task was given as one in a set at the official national exam in 'Norwegian' for all upper secondary schools (high schools) in 1973 in Norway, 'The number of youngsters who marry already in their teen ages has increased heavily the last years. There are especially many girls who marry that early. What can be the causes for this development, and what is your view upon that so many marry so young?' Later the same year, a class at a local school got the same task. However, one of the students contested the very premise for the task and wrote, as his assignment, a harsh critique of the whole task, arguing why the premise is invalid. The local lecturer gave him a bad mark (for not having answered the given task). The student then contacted the Central Statistical Office, who could confirm that he was actually right. The premise was not valid. He now approached the teacher and the Norwegian department at the school again, without a result. He even challenged the school's headmaster, who was a MTE teacher as well, in the hope that this 'sensible man' would support his claim. However, neither the headmaster nor the Norwegian department at the school would admit any mistake. The task had even been given at the national exam the same year and had not caused problems. And one crucial argument was: You are bristling up against the task instead of trying to come to grips with the problem (Retold in English based on an article in Aftenposten (newspaper), Oslo October 1973 by Sigmund Onstad).

This reminds us of a confrontation between Soviet cultural-historical psychologist Luria and illiterate adult Uzbeks, who rejected the premises of Luria's syllogisms in his famous experiments in Central Asia in the early 1930s (Luria, 1976; Matusov & Julien, 2004; Scribner, 1977). Authorial judgments by outliers can be judged by other outliers, whose judgment will have to be also authorial, thus, contested and not objective because the purpose, the definition of quality, and the criteria for judgment emerge in the judgment itself and do not pre-exist it, as assumed in school tests and Kahneman's and Luria's psychological positivist experiments. Kahneman's positivism is universal, while Luria's positivism was sociocultural.

Another related limitation of Kahneman's research ontology is his interest in isolated, self-contained, monologic mind—this is a typical flaw of universal positivism. Again, this interest may be legitimate in *poiesis*-like practices divorced from other aspects of human life. However, in *praxis*-like activities, where a new meaning, a new goal, a new quality, and a new judgment criterion emerges, the mind should be viewed as connected,

transactional, and dialogic. In *praxis*-like activities, meaning emerges not as a pattern or rational calculation or sociocultural constraints like school institutions (conventional or progressive), but as a serious answer to a genuine, information-seeking question asked primarily by the other and secondarily by the self (Matusov & Marjanovic-Shane, 2017). The human mind can never be fully reduced to System#1 or System#2 (or their combination or the sociocultural mediators). Human core nature reveals and realizes itself in human transcendence, self-actualization, authorship, and dialogue when they become outliers, that is, break out of any patterns. We need a new science of the human mind as authorial dialogic outliers, moving away from *poiesis*-like objective voiceless methodologies (cf. Bakhtin, 1986, who made a similar call).

In dialogic research, researchers involve their heart and mind in making sense of the studied patterns, their values, consequences, and imagined new patterns and values (Matusov et al., 2019a, 2019b). In contrast to positivist research (universal or sociocultural), dialogic researchers study the unique authorial subjectivity when participants author their unique actions, deeds, ideas, and life. In a dialogic analysis, researchers bring the ontologies of their personal experiences and stories. They connect the cases with their research interests. They keep theorizing by bringing the existing theories. They try to abstract cultural values from the cultural practices and evaluate and justify their authorial judgments. The participants also engage their imagination as they imagine what might happen if a cultural practice from one culture is brought to the cultural expectations and the legal regime of another culture.

The psychology of human judgment is viewed by Kahneman either as a deviation from classical rationalism or as an illegitimate shortcut to classical rationalism. These psychological deviations and shortcuts have their own regularities that cognitivist psychologists, like Kahneman, study by using a large number of subjects. Classical rationalists view people as perfect or, at least, as desired machines. Cognitivist psychologists view humans as imperfect machines, although not without their own heuristic advantages in "high-validity" practices. Like my colleagues and I did in sociocultural research, we found how these educational institutions shape their students' working together and guidance. In all these cases, humans are given and calculable (at least in a statistical sense of the big numbers).

My criticism here is not that classical rationalism, cognitive psychologism, or sociocultural positivism are wrong per se, but rather that their truth is limited, and the positivist researchers do not seek their own limits. It is important to study humans as the given: how they are shaped by their biology and sociocultural factors. Thus, I agree with classical rationalists and cognitive psychologists, like Kahneman, Tversky, and Klein, that humans are and can be both perfect and imperfect machines in their thinking and acting. Their studies of humans as imperfect, predictable, calculable machines are very useful and consequential. However, I disagree with the positivist approach to mind when it reduces humans to perfect or imperfect predictable calculable biological and/or sociocultural machines, and it defines human nature as such. I see the most important use of studying humans as (im)perfect machines in helping us stop acting like rational or irrational machines when we wish so and, thus, our claims to our non-machine–like, unpredictable, incalculable, dialogic humanity. As Bakhtin claimed, "The better a person

understands their own determinism (their own objectness), the closer they come to an understanding and realization of their own genuine freedom" (Bakhtin, 2002, p. 398, translation for Russian is mine). I think it is extremely useful to consider humans as being both (im)perfect machines and as persons with the authorial dialogic agency. In this sense, my view of humans is unapologetically dualistic: positivism should study the given, dialogism should study the meaning.

In dialogic research, the researchers' primary questions, that is, the meta-inquiries, are, "What does something in question mean to diverse people, including me, the researchers, and why? How do diverse people address and reply to diverse meanings? What are the values behind them? Which values are better—why, for whom, and for what?" (Matusov, 2020a, p. 29). In both sociocultural and universal positivism positivist research, that is, the meta-inquiries are, "How things really are? What is evidence for that? How to eliminate any researchers' subjectivity from the research? What are (universal or cultural) patterns of the studied phenomenon?" (Matusov, 2011, p. 29). Both types of meta-inquiries are legitimate. Positivism—sociocultural and/or universal—makes dialogic analysis grounded. The ungrounded, positivism-free, dialogic analysis leads to mysticism and mystification. On the other hand, dialogism makes positivism meaningful, imaginative, authorial, and responsible (Matusov et al., 2019a, 2019b).

As my colleagues and I argue (Matusov et al., 2019a; Matusov et al., 2019b), the results of dialogic analysis become new "data" for its future "consumers"—that is, new researchers, practitioners, and readers (see Tobin et al., 1989, 2009, for examples of such research). The primary goal of the dialogic analysis is for the growing participants-researchers involvement in this unfinalized and unfinalizable dialogic analysis—to develop a new authorial, thus, unique perspective on the studied phenomena that lives in a never-ending Big Dialogue (Bakhtin, 1986, 1999; Bibler, 1991, 1993).

Conclusion

The major strength of positivism is that it provides groundedness. It generates facts. It discovers the objective truths. It creates "ready-made science" (Latour, 1987). For example, positivism can help to establish the truth of human-caused global warming. The particular strength of *sociocultural* positivism is that it shows how this groundedness, facts, and truths might be often shaped by human history, society, culture, practice, institution, politics, economy, and so on. Positivism drives the development of technology and institutions (i.e., human collective mechanisms). It provides technological and organizational solutions to emergent problems. Sociocultural positivism helps to make these solutions contextual suitable to particular sociocultural environments.

The major weakness of positivism—universal or sociocultural—in the humanities is that it is meaningless, a-responsible, a-moral, conservative, reductionist, voiceless, finalizing, objectifying, and homogenizing. It focuses on studying the existing (given) structural-functional patterns. It disregards human agency, authorship, creativity, imagination, voice, uniqueness, meaning, morality, and dialogue. Sociocultural positivism is never at ease with its own positivism, which calls for excluding human

subjectivity from the research findings. It oscillates between its commitment to positivist objectivity and its deep suspicions of sociocultural biases in any objectivity.

However, many sociocultural and even universal positivists in social sciences do engage in making sense of their structural-functional findings, consider moral implications, discuss values, and imagine new possibilities. The considerations are often on the periphery of their positivist research, limited to the discussion session. These discussions do not become the core of the investigations.

Fortunately, there is research that transcends sociocultural positivism. Thus, Joseph Tobin and his colleagues studied preschools in three cultures: Japan, China, and the US in the 1980s (Tobin et al., 1989) and 2000s (Tobin et al., 2009). They videotaped diverse events in these preschools. They found interesting events and phenomena that attracted their attention and asked adult research participants and professionals from the same and different cultures to comment on these selected events and on each other comments. The unfolding dialogue about the videotaped events became the focus of the study. Currently, my colleagues and I try to extend dialogic research analysis pioneered by Tobin and his colleagues (Matusov, 2020a; Matusov et al., 2019a, 2019b). We can only further the study of human meaning, and thus, humans, by studying meaning-making in a dialogue by live people—the unique authors of their own subjectivity—and not pattern-generating cadavers. Meaning-making is killed when people are totally finalized. When we, researchers, reduce meaning-making to universal or sociocultural patterns and the operations of System#1 or System#2 or cultural mediators, and, thus, reduce people to smart machines. I call my sociocultural colleagues while studying cultural particularities to embrace this dialogic analysis and dialogism in general in their positivist research as a particular form of dualism. Rooted in this dualism, both universal and sociocultural positivism provides the firm ground and the material for sense-making, testing values, creativity, authorship, and dialogue.

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Data availability

Data sharing not applicable to this article as no datasets were generated or analyzed during the current study.

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Notes

1. https://www.newscientist.com/article/2107219-exclusive-worlds-first-baby-born-with-new-3-parent-technique/
2. An example of a reading-off solution is "The postage is 7.50 SEK because it weighs more than 100 and so it shouldn't be there but rather in next price category (250 g)" (p. 330). An example of a calculation solution is "The postage is 12.60 because I take 20 grams x 6 = I20 and then 2.10 x 6 = 12.60" (p. 330). A reading-off solution is based on consulting the table, presented to the students, reading off the postage rate from it that is assumed to be correct.
3. Here, I use the term "culture" broadly to embrace all sociocultural contexts.
4. This vignette is heavily based on my review (Matusov, 2017) of Kahneman's book (Kahneman, 2013).
5. Cognitivism refers to a cognitivism paradigm rather than simply to study cognition, see https://en.wikipedia.org/wiki/Cognitivism_(psychology).
6. The magnet problem was not reported in our article—I do not remember the reasons of why.
7. This vignette is heavily based on my article (Matusov, 2015b) and my review (Matusov, 2017) of Kahneman's book (Kahneman, 2013).
8. In a sociocultural approach, the human creative transcendence is often understood objectively as self-organization or emergence rather than dialogic authorship (Matusov & Marjanovic-Shane, 2016).
9. A sociocultural positivism would correct, "All children of *a particular culture*…"
10. Later, when Pedro was in trouble, he named Mr. Jim and another staff member as most important adults, besides his parents, in his life to a social worker.
11. https://www.ted.com/talks/viktor_frankl_why_believe_in_others

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