Tokieda M. (1941) 国語学原論: 言語過程説 の成立と展開 [Principles of the Japanese language: Establishment and development of language process theory], Part I. Iwanami Shoten, Tokyo.

Tokieda M. (1955) 国語学原論: 言語過程説 の成立と展開 [Principles of the Japanese language: Establishment and development of language process theory], Part II. Iwanami Shoten, Tokyo.

Seiichi Imoto has been a research veterinarian (DVM/ PhD) majoring in internal medicine and pathology. It is Arthur Schopenhauer and Humberto Maturana who guided him to constructivist approaches. His current research interests include human individual characters and their axiological expressions.

> RECEIVED: 14 OCTOBER 2020 ACCEPTED: 28 OCTOBER 2020

Author's Response

Counterfactuals: Multiple Realities or an Observable World?

Andrey S. Druzhinin MGIMO University, Russia andrey.druzhinin.89/at/mail.ru

>Abstract • I reformulate and elaborate on important claims relevantly put for debate by the commentators, i.e., (a) counterfactuals are a form of observable experience rather than a plurality of inaccessible worlds; (b) experience cannot be observed in descriptions, but can be observed in films; (c) counterfactuals are a syntactic unity, or a synthesis, of relationally changing attentional objects.

Handling Editor • Alexander Riegler

Relativity and relatability of experience

«1» Alexander Kravchenko raises an important issue of multiple "realities," or worlds "constructed in language" (§8). There are at least two reasons why the notion of multiversum is controversial and may cause a dangerous ambiguity in the context of my research.

« 2 » Firstly, Humberto Maturana (1988) uses the term "multiversum" to refer to explanatory realities of an observer, which is slightly different from what I (and, apparently, Kravchenko) mean by "reality." Maturana's original aim was to explore the notion of objectivity as construed in the domain (or "available within the explanatory path") of an observer when she "realizes that she lives in a multiversa, that is, in many different, equally legitimate, but not equally desirable, explanatory realities" (Maturana 1988: 31). From this point of view, multiversum seems to be an explanatory multiplicity of the world rather than the multiplicity of worlds.

« 3 » Secondly, if we choose a more ontological path and proceed, for example, from David Lewis's (1979: 459) idea of "multiple actualities" and possible worlds in line with Erwin Schrödinger's concept of superposition, we will risk departing from constructivism. To posit the existence of

multiple worlds in multiple observers we must compare at least two other observers with each other independently of our own observer's point of view. Yet, all we can do is compare other people's experiences or language(s) against our own and only our own ones. In other words, to state that somebody thinks differently from somebody else and/or speaks two different languages, we must recognize the invariant "thinking" and language relatively to which this difference emerges. This invariant is our own thinking and our own language. Does this recognition mean that we rely on the principle of universal or "objective" reality? Far from it, especially if we remember what intellectual effort it takes us each time to prevent quarreling and act constructively, i.e., to understand that and, importantly, why our opponent disagrees with us on one and the same topic of discussion. For this reason, I believe it would be fairer to speak of constructing a difference in ourselves rather than recognizing the difference existing between others per se. This thesis brings us closer to an experiential view of language and reality according to which we construct the world ourselves: we shape a reality and make it viable (= enactive). Thus, all we know is our world (our enactments of the world); we cannot and need not know the world at large or "other multiple worlds."1

« 4 » There are important epistemological implications of such a stance. The first one is the principle of relativity of every observer's experience. It means that every linguistic meaning is inner-subjective, or makes sense only in relation to this observer's experience,

^{1 |} By claiming that there are multiple realities or worlds, we are making another departure not only from the constructivist ground, but from the common scientific paradigm. Assuming the multiplicity, or the multiverse of the world, we deadlock ourselves in the paradoxical logical consequence consisting, i.e., in the impossibility of observation and comprehensive scientific understanding of such realities. Questions like "Are there parts of nature forever beyond our detection?" were called meaningless by Percy Bridgman (Bridgman 1958: 30f). Such questions go against the logic of science by denying the operational possibility of successful scientific exploration of something assumed.

including the value of a perceptual distinction embedded in the meaning. We can construct irreality only out of what is experientially salient for us. Losing a hundred dollars would not be a trigger of counterfactual enactment of the world for a billionaire (e.g., "What if I had not lost a hundred dollars!") unlike for a tourist traveling on a budget, all alone in a foreign country. The second implication is the relatability of experience, by which I mean that all our experience, as long as it is made sense of in the domain of social interactions, is inter-subjective as well, or to some extent, compatible with the experience of others. Relatability and compatibility are not synonymous with "similarity," but they imply that we can and have to share something to be able to interact with one another. This something is not language proper, nor is it experience proper. Rather, this is what I call ways of organizing language and/or experience. These ways (i.e., patterns of bodily neurodynamics) shared by us humans are in the focus of my research (§\$5-25). For this reason, I seek to explain where alternative thinking comes from rather than insist on the absence of one, an important distinction that Vincent Kenny (§28) has probably overlooked. These two methodological implications restated here will help me to respond to Toma Strle's criticism on a number of grounds.

«5» Firstly, in contrast to his complaints in §6, I do not claim that in films we "understand 'what people think, how they do it and how they think it" and that we can observe utterances of film characters. My original point was that in films "we see what people do and what people think, how they do it and how they think it" (§36, emphasis added). In other words, films enable us to "visually observe" (§55, original emphasis removed) people's experience rather than interpret their utterances. By observing I mean collecting direct empirical evidence using our senses (sight but also hearing). By people's experience I mean a complex of emplotted² perceptual and cognitive processes that can be shown on the screen through a variety of film-making techniques (e.g., point-of-view shots, flashback, flashforward, etc.).

«6» Secondly, I do not directly claim that "people's [...] experience (how they feel, in what thinking or perceptual processes they engage) are the same as those of the film's characters" (§6) either. Instead, I make the point that "[w]hen we watch a film, we understand the coherence of what we see, one way or another," so "any film, however fantastic it may be, must be in some way relatable to us, to our ways of organizing the world" (§37). What it means, although it might have been made more explicit, is that films produce coherent moving pictures that we can relate to our experience because our body moves and/or our mind coheres its movement in the same manner. Reasonably enough, we cannot generate the same experience as shown in the pictures because it is impossible from the constructivist point of view. Yet, we make sense of, and empathize with, what is happening, as what is happening is the projection of our experiential

66 The combination of the reality of motion and the appearance of forms gives us the feeling of concrete life and the perception of objective reality. Forms lend their objective structure to movement and movement gives body to forms. (Morin 2005: 118f, italics in original)

«7» So, to answer Strle's Q2, sameness of feelings and engagement in thought processes, as stated in the article, are nothing short of experiential relatability we find in what we observe. What an observer sees on the screen is part of her experiential world in some way or another, otherwise she would fail to observe and make sense of it. A two-month-old child cannot engage in any processes shown on the screen because she has not built up enough experience for this on many levels, from physiological to intellectual. When she does, she will be able to perceive and meaningfully grasp the moving images, but again, what she observes and understands will not be an "external world" of things and ideas but the domain of her experience turned upon itself in an act of reflection.

How empirical are descriptions?

- « 8 » The purpose of my target article was to make a case for irreality as experience built on the lived past through change of value. Irreality is not posited as lived experience as such, but rather as a *hic-et-nunc* emergent experiential configuration of the attentionally salient lived experience and its changed value (§62). For this reason, it appears hardly possible to make an inquiry into the lived experience of irreality (Strle Q1).
- " 9 " One of the options **Strle** suggests (§2) for empirically researching irreality is the first-person descriptive experience sampling method. Although the choice might promise a new perspective on some perceptual aspects of irreality, it cannot possibly be considered a *direct* method of empirical investigation, for two reasons.

« 10 » The first reason is epistemological. Descriptions (in whatever form they come) are a secondary source of acquisition of knowledge in science, because they are not observable natural phenomena. A primary source is always something that involves human senses, i.e., direct observation (Kosso 2011: 9). The second reason why first-person descriptions of experience are not a direct way to investigate experience are the problems of relevance, interference and the concomitant problem of validity. The subject may not know how to describe or may not know what exactly to describe. If the subject is told or given instructions about that, the cognitive processes to be described will be influenced by other descriptions (the instructions for the descriptions, or rather, prescriptions), in other words, the cognitive processes under investigation will not be the pure cognitive processes of the subject even if the description is given in the first person (cf. the so-called "observer effect" in experiments). For example, what will the police rely on in a crime investigation: their observation of (e.g., a video footage of) how a suspect enters the shop and steals something, or listening to or reading a first-person description given by this suspect of where he went and what he did?

Are films a primary source of data?

« 11 » My commentators give a number of reasons why films seem to be an unreliable source of observation for a scientific

^{2 |} I borrow the term "emplotment" from Paul Ricoeur, who defines it as a poetic configuration of events and their succession, which results in "the story's capacity to be followed" (Ricoeur 1983: 66).

study of experience. In order to show why we should accept films as an alternative source of genuine observation of human behavior and, importantly, experience, let me first summarize these cleverly articulated reasons:

- A | Films do not appear as something humanly natural because they are premade and lack "spontaneous causation" (Martin Fultot §3);
- B | Fictional behavior cannot be observed (Fultot §1):
- C | Films are impoverished compared to the "natural world" whose settings are not constrained by somebody's (e.g., script writer's) imagination (Fultot §7);
- D | Films are not to be trusted because they are designed to sell and entertain (Fultot §8):
- E | Films are not the "actual experience," as they are a "composite interpretation of experience" by several contributors (director, script writer, actors, etc.). (Pille Bunnell §2)
- «12 » Argument A harbors a logical fallacy. That a film was made before it was shown is a temporal relationship in the first place. We need other arguments and further explanations to recognize it as a reason for the assumption that films cannot be a primary source of observation of human behaviors. "Lack of spontaneity" is an insufficient explanation because causation in the behaviors of actors is always spontaneous from the observer's (viewer's) point of view. That is why claim A traps us in a flawed logic according to which any carefully rehearsed human behavior, let us say, during an etiquette dinner, is not something natural and worthy of scientific observation.
- "13" By the same token, argument B is flawed because (a) it is opinion-based ("cannot" and "should not" are different forms of contention), and (b) it presents the notion of observability in a distorted fashion. To be observable means to be accessible to the sensorial perception and logical interpretation. There is no reason why recorded human behavior displayed in a film cannot be observed.
- « 14 » Although argument C comes across as a convincing explanation of why films are not reliable, there is still an important reservation to be made. The "natural world" (or "environment," in James Gibson's

1966 terms) is always constrained by the imagination of somebody who is observing this world. A child's "natural world" is not the same as an adult's one because a child cannot imagine many of those cause-effect relationships possible in the environing world that an adult can. Indeed, a child's world does not lose its observational scientific value if the point of research is to investigate a child's experience in the process of its construction and development (as established in the works of Jean Piaget 1932 and Lev Vygotsky 1934). Similarly, films do not lose their scientific value if the purpose of research is to explore the mechanisms of human imagination itself (as part of experience construction).

« 15 » Argument D does not prove why films are unreliable for experiential analysis either. Commercial interests among others underlie many scientific endeavors, including the agreement of ordinary people to participate in tests and experiments as well as the agreement of researchers and experimenters to participate in pre-funded scientific projects. Fyodor Dostoyevsky is known to have written some of his novels to pay off his gambling debts, which does not diminish the literary value of his works.

« 16 » In statement E, there is a terminological obscurity caused by the term "actual." If "not actual" means "not present," films do not stop being a primary source of data, anyway, because they appear to be present by dint of technological reproduction of the dynamics they record. A scientist recording natural phenomena she cannot physically observe (for many reasons, including those of safety) can rely on the collected data to be observational because they are free of any interpretations. If "actual" means "not observable experience, but interpretation instead," films do not record interpretations, they record emplotted human actions (or better, actings); all interpretations come later, with the observation of such actings. That there is a limited group of people engaged in these actings is a problem of representativeness rather than of validity. However, all experiments lack representativeness of data; this type of limitation is common to all primary sources, when acquiring information.

« 17 » All the major criticism having been dealt with, I am encouraged to find additional arguments in Tom Scholte (§\$2-4) supporting my point of view of films as a source of observational data. Scholte approaches the problem of environment and "natural world" in films with reference to the notion of "eigenform" that even more convincingly helps to explain how exactly we and actors on the screen function analogously on a systemic level. "Nature" and behavioral spontaneity appear as phenomenal and conceptual stabilities that are parallel across the "factual" and "fictional" realms.

Counterfactuals, naming and the attentional model of irreality

«18» The model of languaging proposed in the target article attempts to encompass all the generative mechanisms of experience construction (attention, sensorimotor signals, feedback, reference). If we are to approach the process of naming from the point of view of the domain where this naming is grounded (in response to Seichi Imoto's O1), I would define this domain as the attentional field in which the experiencer synthesizes perceptual distinctions and ways of distinguishing them. Synthesis here is not an accidental choice of term: when we synthesize a few items, it means that these items can be (as if) separate and identified as units of analysis. Thus, the specificity of naming is in that either of the two - perceptual distinctions or ways of distinguishing (reference) - can come into the focus of attention, the other one is (re)constructed by default. The result of such attentional activity is a synthetic, or better, syntactic unity.³

«19 » With that in mind, we do not need, here, to make any special appeal to memory, as memory becomes the neurodynamic property of attention that enables the latter to focus and refocus on its objects. A special treatment of memory, as **Kravchenko** (§5) suggests, seems unlikely to bear any

^{3 |} The choice of the term "syntactic" is not accidental either. I attempt to embrace in this term both the experiential process and linguistic product. As a process-oriented term, "syntactic" (from Greek σύνταξις "arrange together") emphasizes the operational mechanism of synthesis (from Greek συντίθημι "place together"). In terms of product, syntactic unity (a sentence, word combination, etc.) is a traditional object of grammatical analysis in linguistics.

fruit, because we might be tempted to objectify something that is operative and dynamic (e.g., descriptions of memory in terms of space, such as when memory "stores" things, and in terms of time, with the distinction between long- and short-term memory). Moreover, I would be very careful with the terms "physical objects" or "objects of will" and the difference between them. Ernst von Glasersfeld (1995: 87) insisted that the only objects we have are objects of attention and perception. I cannot claim with certainty, but Arthur Schopenhauer's objects of will might well correspond to what I call the "value" of sensorimotor signals (i.e., physical quantities of sensorium) or "feedback" from those. Such value is an important part of reference, semantics, or ways of distinguishing perceptual items, in general. In this respect, there cannot be the same attentional objects in S7 as in S8, there may be only partial coincidence in the attentional composition of the experiences. As was repeated in my target article, differences are many: the first difference comes in value (§59), the second is in the number of attentional objects (§51), the third is in the sequence of these objects (ibid).

« 20 » Ludwig Wittgenstein believed that "the use of words teach[es us] their meaning" (Kenny §9), assuming that words are out there waiting to be used by users who may not be (fully) aware of their meaning before the act of use. In accordance with such a realist perspective on language, Kenny claims that "the words used to describe the construct are not themselves the construct, just as the word-in-use is not the object being described" (§7). Yet, to prove that an object is not its description, we have to compare the object and its description independently of each other.⁴ This independence is impossible, because we cannot imagine a name that refers to nothing, nor can we attend to a nameless thing in an act of comparison. Those who believe otherwise seem to base their judgement on the flawed analogy between a name and a map designed to show some territory that can, in all possible ways, be perceived independently of its map.⁵ A thing is co-emergent with its name and what we are able to compare with each other are two things aka their names. Moreover, as long as George Kelly's constructs are personal, they cannot be but based on language because, by definition, a person (from Latin *persona* "actor's mask, character in a play") is somebody who is distinguished in and by her language only. Therefore, it is rather difficult to imagine a person (not just a *living being*) constructing (or even construing) something "preverbal[ly]" (§§5-7).

"21" I would argue that Kelly's alternativism (Kenny §§29f) is a more psychological way of exploring the mechanisms of reflection through which the dichotomy, or the duplication of the world arises. The target article looks at this problem in an epistemological light (§§25, 65f). I would refrain from identifying Kelly's alternativistic construals with counterfactuals for at least two reasons. Firstly, Kelly does not make explicit the exact difference between constructs, construals and construction. Secondly, language was not Kelly's major concern and object of research, so his approach to the problem of naming itself remains unclear.

- "22 " Counterfactuals are special in the way that they emerge as a *non-linear* construction of experience in and through a change of relation, or by relational changing. This specifically means that:
- 1 | The value of the lived past changes from positive into negative (or vice versa) and counterbalances the value of "here-andnow."
- 2 | Perceptual distinctions synthesized by the experiencer are not in line with (contradict) the ways of distinguishing (e.g., "If only I had won! – But, I lost").
- 3 | This discontinuity of the synthesis does not interrupt but coherently maintains the sequential continuity of the attentional field: we recognize and enact the flow of time (the flow of experience).⁶
- 4 | This enacted flow is reversed: we direct our attention on its objects, not the way our attention "directs us" in the flow of living (against the intentional direction).

- « 23 » Let me make it more explicit that counterfactuals are the process of changing the relation of attentional objects. What Bunnell (§4) suggests by an alternative story, Kenny (§30) by a world of dreaming, and Scholte (§4) – going even further – by all imaginary circumstances, might rather be a resultant product of such a process detached from the immediate context of relational change. For example, the statement "My dream job involves traveling" is not an instance of irreality as understood in the target article. If we assume that this statement is as irreal as the expression "If only my job involved traveling," we will face the problem of terminological obscurity, as any form of alternativity could hypothetically be considered irreality.
- "24." Although Point 2 above may be applicable to the description of imperatives as pointed out by Imoto (§4), the rest of the points do not satisfy the semantic requirements of commands. More than that, I would assume, in line with von Glasersfeld (1995: 130f), that commands are not a reflective mode of our enactment of the world. Therefore, they could hardly be viewed as experience at all, to say nothing of the non-linearity of its construction.
- « 25 » Irreality viewed through the prism of attentional activity becomes a more transparent topic of grammatical research. The syntactic/synthetic unity of irreality results from the following analytical units:
- Contrasting negation ("If I had ... but, I don't have") creates a relational change and "reverses the experience."
- Past tense forms specify what kind of lived experience we are reversing (in a reflected abstraction).
- The so-called "future-in-the past" would frame the arrow of time, or the meaning of directionality, in other words, the future moving into the past or vice versa depending on the relation of the observer.
- « 26 » Let me make the last point more explicit. We cannot conceive that time flows without comparing what was before with what will be next. To make this comparison, we need to grasp these two moments as if independently and piece them together in one experience. This grasping is possible through our own perspective only (which is called perceiving: per "through" and capere "grasp"). This is where Tsutomu Miura's self-split occurs (Imoto §3): we refocus our

⁴ This methodological procedure was proposed by Wittgenstein himself (1922: 2.223): "In order to discover whether the picture is true or false we must compare it with reality."

^{5 |} The territory–map analogy was first drawn by Alfred Korzybsky (1933: 58).

⁶ Put simply, "we go with the flow of time" and become aware of it.

« 27 » By way of concluding, I would like to reaffirm an enactive and constructivist stance on reality and whatever irreal forms it could take: everything that enters our domain of observation is constructed by us as part of relative and relatable experience. Vice versa: everything that enters our relative and relatable experience as if "out of nowhere" (for example, linguistic forms and meanings of irreality) derives from the observable world we relate to ourselves. To claim that this world is not ours or is a part of other worlds means to deny its observability or the possibility of its scientific understanding, or, as suggested by Francisco Varela, Evan Thompson and Eleanor Rosch, to walk legless:

66 Experience and scientific understanding are like two legs without which we cannot walk. 99 Varela, Thompson & Rosch (1993: 14)

References

- Bridgman P. W. (1958) The logic of modern physics. Macmillan, New York. Originally published in 1927.
- Druzhinin A. S. & Polyakov O. G. (2019)

 Когнитивное моделирование семантики сослагательного наклонения (на примере глагола would) [Cognitive modeling of the semantics of the subjunctive mood (a case for the English verb would)]. Yazyk I Kultura Language and Culture 45: 44–63.
- Gibson J. J. (1966) The senses considered as perceptual systems. Houghton Mifflin, Boston MA.
- Glasersfeld E. von (1995) Radical constructivism: A way of knowing and learning. Falmer Press, London. ▶ https://cepa.info/1462
- **Kosso P. (2011)** A summary of scientific method. Springer, New York.
- Korzybski A. (1933). Science and sanity: An introduction to non-Aristotelian systems and general semantics. International Non-Aristotelian Library Publishing Company, Lancaster.
- Lewis D. (1979) Counterfactual dependence and time's arrow. Noûs 13(4): 455–476.
- Maturana H. R. (1988) Ontology of observing: The biological foundations of self-consciousness and the physical domain of existence. In: Donaldson R. E. (ed.) Texts in cybernetic theory: An in-depth exploration of the thought of Humberto Maturana, William T. Powers, and Ernst von Glasersfeld.

- American Society for Cybernetics (ASC).

 ▶ https://cepa.info/597
- Morin E. (2005) The cinema, or the imaginary man. Translated by Lorraine Mortime. University of Minnesota Press, Minneapolis. Originally published in 1956.
- Piaget J. (1932) Мышление и речь ребенка [Thought and speech in a child]. Gosizdat, Moscow. French original published in 1923.
- Ricoeur P. (1983) Time and Narrative. Volume
 1. Translated by Kathelin McLaughlin and
 David Pellauer. The University of Chicago
 Press, Chicago and London.
- Wittgenstein L. (1922) Tractatus logico-philosophicus. Kegan-Paul, London.
- Varela F. J., Thompson E. & Rosch E. (1993) The embodied mind: Cognitive science and human experience. MIT Press, Cambridge MA.
- Vygotsky L. (1934) Мышление и речь [Thought and speech]. State Socio-Economic Publishing House, Leningrad.

RECEIVED: 12 NOVEMBER 2020 ACCEPTED: 15 NOVEMBER 2020