

Literacy, Literature and Mind¹⁾

—Jerome Bruner and the Narrative Turn in Cognition

(文字通りの意味, 文学的意味と心——ジェローム・ブルーナーと認知研究におけるナラティブ・ターン)

David R. Olson

Ontario Institute for Studies in Education, University of Toronto

Abstract

This paper explores the relation between narrative and rationality. Bruner's positive views about the importance of narrative are defended against the negative appraisal of cognitive theories of Kahneman and Tversky and Stanovich. It is argued that whereas narrative is a device for capturing nuance of meaning, cognitive theories identify rationality exclusively with the use of strict or narrow meanings of such logical connectives as *and* and *or* meanings that took their specialized form only with the rise of modern Western scientific discourse. Narrative remains the dominant form for expressing rich and diverse, contextually sensitive, meanings.

Key words

modes of discourse, modes of thought, paradigmatic, narrative, imagination

要約

本論文は、ナラティブ・アプローチと論理主義との関係を明らかに示すことを目的としている。特に、ブルーナーの取ったナラティブ・アプローチの重要性について、カーネマンとトヴァースキー、スタノヴィッチらの認知理論による（ナラティブに対する）否定的な評価に対抗する形で議論を展開している。ナラティブ・アプローチが意味の微妙な差異を把握する道具であるのに対して、認知理論は理性的な活動を同定する道具である。後者は、就中、西欧の科学的言説に用いられる特化した形式論理（例えば、「かつ (*and*)」、「または (*or*)」で結合される厳密な論理式による表記）に意味を狭く限定してきた。それに対してナラティブ・アプローチは文脈を敏感に反映する豊かで開かれた意味を表現する優れた形式を維持しているのである。

キーワード

ディスコースの様式, 思考の様式, パラダイグマティック, ナラティブ, 想像力

* 日本語要約・解説は小島康次による。解説は p.180 参照。

One truth is surely self-evident: for all that narrative is one of our evident delights, it is serious business.

Bruner, *Making stories* (2002, p.89)

The ubiquity of narrative

It has become common in the Western press to refer to almost any kind of explanation or accounting as a story, a narrative. What would in the past have been referred to as an explanation, a theory, or a fact is now referred to, simply, as a story. Thus a major international newspaper recently published the headline: "To fix the economy, tell the right stories. World confidence is driven by narratives; we need plausible ones". The writer is not asking for a causal explanation but for a narrative. Even the struggle for American Blacks for the vote is called "the freedom narrative" and for Palestinian independence is called "the Palestinian grievance narrative". It seems that "story" covers all kinds of accounts.

This is a new development. In the past, stories have been seen as human fabrications, products of the imagination that could be readily dismissed as "just a story", an invented account without substance. Herodotus, the first Greek historian, writing in the 5th century BC, dismissed the account of previous writers as such fabrications, claiming that the stories told by the Greeks were "ridiculous" and he set out, not to tell more stories, but to write the true history. And science, of course, advances itself as a body of facts and logically derived theories designed to replace the folk theories and folktales of the society. Most recently, some cognitive psychologists have attempted to show that readers who submit to the conventions of narrative are irrational, a claim that I shall examine in detail.

Jerome Bruner has been a leader in the attempt to rehabilitate stories, to find their valid and legitimate place in the explanation of the human mind and human culture. His attention to narrative grew out of his earlier work on what was called "the beholder's share" in the act of

perception. He showed that persons are not passive recipients of the stimuli in the environment but rather that they perceive the world in terms of their own needs and interests. Persons were in part the cause rather than the recipients of their experience. He was not alone in this enterprise. Along with such theorists as Cassirer—who emphasized the role of symbols in human thinking—, Vygotsky—who emphasized the social and historical origins of symbols—, Nelson Goodman—who spoke not of discovering worlds but rather of making them via symbol systems—and Piaget—for whom to understand was to invent—Bruner advanced the argument that perception provided not copy of the world but a construal, a way of seeing and acting in a social world. Thus, instead of, or in addition to theories that explain behavior in terms of rules and representations, schemas and scripts, Bruner has along with other psychologists, economists and sociologists turned increasingly to offering explanation in terms of stories, of narrative.

As the epigram for this paper indicates, for Bruner, the "narrative turn" involved the claim that stories do far more than merely entertain; it is the claim that people actually represent their own experiences in a narrative format. In telling stories to themselves and others they give form and meaning to their experience. More and better stories enrich that experience.

Bruner's concern has been to rehabilitate narrative as an essential, even fundamental, mode of thought. Bruner has brilliantly explored how people, including very young children, weave the unforeseen events in their lives into a coherent narrative of the self. Our selves are the focus of the stories we tell about ourselves and our place in the world. The self is not a preformed given entity, he argues, but rather the invention of believable narratives about our experiences in relation to others and to a somewhat unpredictable world.

These self-narratives are not free constructions of the imagination but rather are drawn, to a large extent, from the stock of stories available in the society in which we live. Bruner cites a study by Rick Shweder (Bruner, 2002, p.121) who collected self-narratives in the form of autobiographical memories from people in different societies. Interestingly, the Asian subjects in retelling the

stories of their early lives made many more references to community-related judgments whereas Western subjects reported more episodes of personal autonomy. This is taken as another indication of the individualism of Western societies. What we in the West see as individualism, those in the East are more likely to see as egoism! Yet all subjects used narrative modes to reconstruct their personal experience. As novelist Julian Barnes (2009) suggested, "human consciousness always insists on narrative and meaning".

Not everyone is so impressed with people's reliance on narrative. Bruner describes two contrasting attitudes to story. In one camp Bruner places the "fabulists", those who point out the importance of story, and in the other, the "antifabulists" who worry about the ways that stories mislead (Bruner, 2002, pp.11-12). Fabulists describe the virtues of story for its power not only to entertain, but also to "subjunctivize" experience, to bring experience out of the ordinary world of doings and happenings into the world of the possible, the hypothetical. It is to enter the world of the imagination. It is to learn to see that what happens is only one out of a large number of possible outcomes. In a word, stories allow one to adopt a more reflective and self-conscious attitude to experience. Stories liberate the imagination.

But the imagination gives rise to error as often as to truth. Indeed, historically, narrative was seen as an art, a part of the poetry that Plato would have banned from the Republic. Modern critics are equally suspicious, claiming that people spin themselves into stories that are clearly at odds with scientific and logical truths. As an example, in America much ink is spent in the science versus religion debate between the Biblical account of creation and the Darwinian account of evolution, one side insisting that creationism is a scientific theory, the other that it is rather a religious "Biblical narrative"; one side that Darwin's account is just another story, the other that it is a rigorous scientific theory. The frontier between story and theory has become a much-contested one. When does a story become a theory? In advancing psychological explanations the problem is more difficult still because psychological explanations often rely on an inexhaustible list of possible exceptions that are better explored in narrative

than set out in truly causal laws. Hence some psychologists have begun to turn from the causal theories offered by standard cognitive science and to adopt, with Bruner, "the narrative stance".

In his earlier writing on narrative Bruner saw narrative as one of two equally important modes of representation, the more scientific and logical form that he dubbed the "paradigmatic mode" and the less formal mode that he called the "narrative mode". Both were seen as essential to understanding the mind—one tied more to the sciences the other to the humanities. In more recent writing (Bruner, 2002) he acknowledged that the contrast between and comparison of the two modes "has been left behind" adding "for better or worse" (Footnote 19, p.115) and he has concentrated on the diverse uses of story in literature, law and life.

What a major theorist such as Bruner "left behind", the scraps from the table, so to speak, provide sufficient nourishment for less adventurous thinkers and in the last part of this paper, I shall revive the distinction between the paradigmatic and the narrative in the light of the aforementioned recent research on reasoning and rationality.

What is a story?

The critical centre of a story is what Aristotle called the *peripeteia* the violation of expectation, the event that upsets the ordinary, taken for granted, everyday happenings, what I shall call "exceptionality". Kenneth Burke (1945) in *A grammar of motives* referred to this violation of expectation as "Trouble" with a capital T. "In the still of the night, there is a knock at the door. And in comes a stranger". The unexpected exceptional event is at the heart of the story. That exceptionality is what makes stories endlessly entertaining.

But stories require other features as well:

1. A cast of characters
2. A setting that provides the basis our expectations as to what normally occurs: a restaurant, a beach, a post-office, a bar, a market, a home, or the like

3. Trouble, the peripeteia, the violation of the expected; exceptionality
4. A resolution of the trouble (not essential)
5. A narrator to tell and audience to listen

It is the trouble, the Trouble, that violates the reliable expectations of the listener. There is a phrase in logic that captures, if not to exclude at least to domesticate, the notion of trouble. It is the Latin expression *ceteris paribus* that means "all other things being equal". A scientific law, for example, Charles' Law relating the pressure and the volume of a gas, claims that an increase in pressure causes a linear decrease in volume, *ceteris paribus*, that is, all other things being equal. The law does not hold if the temperature changes or worse still if there is a hole in the container. Scientific laws require that all the other conditions excluded by the *ceteris paribus* clause can be systematically controlled, if necessary by creating an artificial world known as a laboratory (Latour & Woolgar, 1986). However, in literature, and as I shall argue presently in the social sciences, there is no way to exhaust all the possibilities excluded by that clause. In a story, as in real life, when there is a knock at the door, it is someone who is expected; when "in comes a stranger" that *ceteris paribus* condition has been violated. In a story, all things are conspicuously not equal, nor can they be systematically ruled out as they may be in a scientific laboratory. In a story, the unexpected occurs. The more unexpected, the better the narrative. It is, after all, the unexpected event that makes the story worth telling, thereby creating a link between the narrator and the audience. But, as we shall see, it is also the reason why narrative is so important to explanation in the social sciences in general and in the study of the human mind in particular; it is a world in which one cannot expect strictly causal laws; it is impossible to assume, for any real, naturally occurring event, that all other things are equal. Let us explore this issue more fully.

Ceteris paribus.

Ceteris paribus is a Latin phrase, literally translated as "with other things the same." It

is commonly rendered in English as "all other things being equal." A prediction, or a statement about **causal** or logical connections between two states of affairs, is qualified by *ceteris paribus* in order to acknowledge, and to rule out, the possibility of other factors that could override the relationship between the **antecedent** and the **consequent**.

(Schlicht, 1985)²

Put simply, *ceteris paribus* marks the limits of generalization. "I'll meet you for lunch tomorrow *ceteris paribus*", that is unless something completely unforeseen comes up. My grandmother always guarded her promises by adding "Lord willing". She thereby acknowledged that not everything was under her control. The history of science is replete with cases in which scientists were misled or confused about which factors had to be listed as being held equal. Prior to the invention of astronomy, astrologers sought to influence the motion of planets by prayer and ritual. Astronomy became a science when the factors relevant to celestial motion could be enumerated and those irrelevant to celestial motion excluded by the *ceteris paribus* clause. In this way the *ceteris paribus* conditions could be enumerated and contained thus allowing causal laws to be formulated.

In literature, there is no way to limit these conditions. In fact, the open-ended opportunities for exploring the conditions that violate expectation define narrative. Narrative is the primary means for exploring the possible, of linking unlikely events into a coherent story.

The use and misuse of narrative

As I mentioned earlier, Bruner has left behind the contrast between narrative and paradigmatic discourse. Forms of discourse, what we refer to as *genres*, are dissolving to some degree in modern forms of literature and Asian languages tend not to draw the same sharp distinctions that Western cultures, following the Greek model, do (Leezenberg, 2001). Yet, as I have suggested above, a distinction between narrative and other

forms of discourse, especially that between narrative and scientific / philosophical discourse, may be drawn on the basis of assumptions about *ceteris paribus* conditions. Discourse that restricts these conditions in a manageable way so as to allow the formation of lawful relations defines the paradigmatic genres, the discourses of science and philosophy; discourse that treats these conditions as essentially open ended defines the narrative genres.

We may sharpen the distinction by contrasting the forms of rationality exhibited in scientific / philosophical discourse with that exhibited in literary narratives. Let us begin with a literary example.

Consider poor Mary Barton, the central character in Mrs. Gaskell's 19th century novel of the same name (Gaskell, 1848), about life in a textile mill-town in England a century earlier. Mary Barton is the beautiful and dutiful daughter of a struggling weaver who is courted by the mill owner's son, Harry. A reader, reading this novel, may think: Is it more likely that Mary Barton will marry the mill-owner's son, or is it more likely that she will marry the mill-owner's son *and* use her newly acquired status to relieve her family from oppressive poverty? Most readers will choose the latter, and if current research on rationality is to be believed, those readers would be irrational. We shall return to Mary Barton presently.

Failures of rationality of this sort have become a favored topic in the psychology of reasoning in the past few years largely because of the discovery by Kahnemann and Tversky (1996) of what they called "cognitive illusions", cases in which adults are distracted into making invalid decisions. Even well educated persons often draw conclusions that are formally invalid. Stanovich (2008) in an informed and readable book has reviewed this rich literature on invalid reasoning, what he calls "irrationality", and he explains these failures of rationality in terms of a cognitive processing model that would explain these failures. The reasons why thinkers frequently draw unwarranted conclusions are often bad ones and when recognized as such may be held in check or so, at least, educators hope. The list of types of errors in reasoning include anchoring bias, confirmation bias, hindsight bias, self-serving bias, base rate neglect and other failings "this flesh is heir to".

These errors are not all of the same type, some caused by ego-centrism, some by cognitive overload, and yet others, I shall suggest, by a conflation of genre, namely, of narrative with more scientific-philosophical discourse. But rather than claiming that such reasoning is irrational, I shall accuse the experimenters of a certain blindness to the conventions of narrative discourse. Thus, I shall attempt to show that narrative, far from being the cause of errors in reasoning, is an alternative and valid mode of thought.

The most famous of the problems studied by cognitive psychologists is that of a certain fictional character named Linda. The story continues: "Linda is a 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 anti-nuclear demonstrations." The reader is then asked to "Rank the following statements by their probability" and the statements to be ranked included:

1. Linda is a bank teller.
2. Linda is an insurance salesperson
3. Linda is a bank teller and is active in the feminist movement.

Most adults commit the logical error of thinking that 3. is more probable whereas, by necessity, the probability of 1. is greater. Rather than see the problem in terms of probabilities, thereby choosing 1., 80% of subjects see it in terms of what Stanovich refers to as "similarity assessment"—it seems like a good description of Linda—and choose 2. And are thereby judged by the psychologists as irrational. Is that attribution warranted?

In fact, readers of literature, contra to readers of *Mary Barton*, are not blind to probabilities. In Tolstoy's celebrated novel *War and Peace* (Tolstoy, 2002/1868), the Czar asks General Kutuzov why he has decided to abandon Moscow to the invading armies of Napoleon. Kutuzov replies: "Which is worse? To lose Moscow? Or to lose Moscow and the entire Russian army?" The Czar concedes that the general is right not to try to defend Moscow; a double loss is greater than a single one. And as every reader knows, although Moscow was burned, the army survived to destroy the retreating French troops. So if probabilities are not the problem for readers, what is?

Subjects are judged as irrational in the Linda problem because they fail to apply a statistical model. Indeed, they were asked "Which is more probable?" and so should, perhaps, be alerted to the type of problem they were facing. If we apply a statistical model to the Linda problem, it would be represented thus. Is she more likely to satisfy condition A, that she become a banker, say with probability of 0.5, or that she satisfy both condition A, that she be a banker with a probability of 0.5, as well as B, say also with a probability of 0.5, that she becomes a feminist, a joint probability of $0.5 \times 0.5 = 0.25$. Obviously 0.25 is less than 0.5, so A is more probably than A and B together. Readers are misled by their over reliance on their literary intuitions about Wendy. For good reason as we shall see when we return to poor Mary Barton.

So, consider again the narrative model carefully constructed by Mrs. Gaskell. The likelihood of Mary Barton 1. marrying the mill-owner's son is zero, unless 2. she is granted the right to benefit her impoverished family. Consequently, the probability of meeting both conditions 1. and 2. is greater than that of meeting of the single condition 1., namely, that she marry the mill-owner's son. The narrative model would seem to predict just the opposite of that predicted by the statistical model. And it is the one most frequently chosen by readers and subjects in experiments. The narrative model allows scope for all sorts of contingencies; one cannot assume "all things being equal", the *ceteris paribus* clause.

Or, consider a more famous case, the Biblical story of Ruth. Ruth is a Jewess admired by the non-Jewish king. Ruth knows that only the king could save her father, and her people, from the evil plottings of the king's servant Haman. Which is more likely: That Ruth marry the king? Or that Ruth marry the king *and* defeat Haman's threat? The latter because she would marry the king only if he frustrated Haman's evil plot. And a reader is not irrational if he or she judges the latter as more likely.

Again statistically, the probability meeting two criteria is the diminished product of the probability of each of the criteria, so the "rational" answer is that it is more likely that Ruth will marry the king than that she will marry the king and plead for her people. However, the narrative context makes the latter alternative the more likely because if she

could not defend her people she would not consider marrying the foreign king at all.

But there is a catch. Technically speaking, it is not possible that the joint probability of being a banker and a feminist is greater than simply being a banker because the part cannot exceed the whole; Linda is a banker in both cases. Again, Mary Barton even if she marries to help her family she still marries the mill owner's son. So in both cases the specific claim cannot exceed the general one. This is why most subjects in such experiments eventually come around to agreeing that being a banker is more likely than being a banker and a feminist. Readers have, plausibly, read the "and" as "if only"— a move permissible in literature but impermissible in formal, logical discourse. That would make the probability of 1 equal to that of 2.

However, there is a further linguistic trick that plays on the use of the word "or". Technically speaking, the category "banker" is an inclusive category that includes "banker and feminist" just as the category "animal" is an inclusive category that includes "rabbits". But in informal discourse, including narrative, categories conjoined by "or" are ordinarily contrast mutually exclusive categories such that if one category is "banker and feminist" the contrasting category is "banker and not feminist". Or if "animal" is contrasted with "rabbit", the reader or listener infers that "animal" is to be interpreted as "*other* animal". Piaget (1962) reported just this pattern in young, unschooled children. Children are told that "There are 3 rabbits and 2 ducks". When asked "Are there more rabbits or animals?", children reply, "Rabbits, because there are only 2 ducks". That is, they treat the question as "Are there more rabbits or *other* animals?" So too, do adults unless they are forewarned that they are to treat the expressions strictly, literally, or technically and have been schooled in just these the conventions. This specialized form of discourse has been described as technical, literalist or "modernist" (Reiss, 1982) according to which interpretation is to be confined strictly to the definitional meaning of the words including the technical meanings of the logical connectives "and", "or" and "not" as well as quantifies "all" and "some" and setting aside any possibly relevant contextual implications; in a word, treating the text as

complying with the *ceteris paribus* convention of "all other things being equal".

Narrative is not only an alternative to more formal and statistical models of rationality, it is by far the more universal mode of thought. Indeed, it takes several years of schooling for reasoning to be brought under the more austere forms of rationality essential to the kinds of tasks confronted in more formal contexts (Stanovich, 2008). Indeed, the issue is not one of rationality but of learning to recognize and cope with alternative genres of literature.

Narrative is literary genre appropriate for coping with human contexts in which the logical demands of *ceteris paribus*, that is, all things being equal, cannot be met. There is no formal computational rule for determining the actions of unique persons in unique situations. Mary Barton is a uniquely human person in which feelings of concern, values and goals, temper every decision. The writer, Mrs. Gaskell, plays on the reader's knowledge of these personal characteristics and readers use that knowledge to anticipate the actions of Mary Barton and their consequences. Narrative, consequently, provides a frame for probing into the vicissitudes of everyday life.

A discourse model of reasoning

Formal reasoning is reasoning that takes statements as having a fixed literal meaning and that the *ceteris paribus* condition applies. Ruling out imagined possibilities in this way provides the basis for formal reasoning. Such reasoning is at the center of a particular form of discourse that Bruner called paradigmatic, and that is central to the discourse of science and philosophy. It is a form of discourse that is closely tied to the Western tradition that originated with the Greeks and that is passed down to our children through formal education. It is a discourse of strict definitions of terms, the literal meanings of statements, strict usage of logical connectives, operating within the condition of "all other things being equal".

But just as scientific or paradigmatic discourse has its rules and conventions, so does narrative discourse. In addition to the features of story that

I outlined at the outset, there is the formal convention known to every reader and spelled out in every manual of story writing: "The invariable rule should be, put in nothing that has not a bearing on the catastrophe of the story, and omit nothing that has" (Cody, 1894, p.37). It is a convention recognized by even the youngest children (Winner, Rosenblatt, Windmueller, Davidson, & Gardner, 1986). The Linda problem is presented in the narrative genre. It is clearly fictional and the reader recognizing it as a narrative knows that the mentioned details are essential to the story (or they should not be mentioned). In spite of this, the reader is required to read it in paradigmatic, that is the scientific-philosophical genre, and to treat as irrelevant the detail that Linda is committed to social justice. When the reader fails to comply with the assumptions of the test giver, he or she is judged irrational.

I would suggest that what is at stake is the experimenter's insensitivity to the conventions of genre. Indeed, Stanovich, citing Kahneman, describes these different interpretive stances (i.e., ways of reading) as "framing effects". Framing effects are "basic violations of the strictures of rational choice" (Stanovich, 2008, p.88) as they are responses to surface variants or "trivial rewordings" of formally identical problems. As I have indicated above, narrative is closely attuned to surface variants and readers of narratives know that those variants cannot be ignored. Reasoning tasks in which logical problems are embedded in narrative forms are neither narrative nor paradigmatic but may be "read" as either. Learning how testers intend their narratives to be read is critical to passing the tests.³⁾

In fact, there is a long and controversial history of these different ways of reading in the field of cultural psychology. Students of culture were early drawn to what appeared to be conspicuous failures of reasoning demonstrated by members of traditional societies who had had limited access to modern society and in particular to a formal education. In cooperation with the renowned psychologist Vygotsky, Luria (1976) conducted a series of studies in Central Asia in an area undergoing rapid social change under the collectivization programs of the government. Luria was able to give a series of psychological tests, including classification and reasoning tests,

to a group of traditional non-literate farmers and to a comparable group from the same villages who had some schooling. The least literate tended to treat tasks in a concrete, context-bound way, whereas those more educated, treated them in a more formal, logical way. No doubt the educated subjects had learned something important. However, it is the responses of the uneducated subjects that are more informative. In a typical, widely cited example, Subjects were told the following story:

1. In the far North, where there is snow, all the bears are white. Novaya Zemlya is in the Far North and there is always snow there. What color are the bears there?

Literate subjects, of course, answered "White". The non-literate subjects tended to reply as in 2.

2. I don't know... there are different sorts of bears. (Luria, 1976, p.108-109)

Luria called such responses failures to infer from the syllogism. Kahneman, Tversky and Stanovich would presumably agree and claim further that these more traditional subjects are irrational. A more charitable explanation would be to say that these subjects are perfectly rational but that they are unfamiliar with the required genre and treated the narrative as a narrative with an unknown and unspecified set of alternative conditions and consequently as open to interpretation. The subject, it appears, treated the story not as a set of logical premises but as a set of ordinary assertions forming the kind of narrative from which one is free to draw one's own conclusion. Schooling, in large part, is learning to manage paradigmatic discourse systematically to the point of learning to read even narratives in a formal, logical manner. And possible problems are particularly difficult to detect when logical tasks are disguised as narrative as Kahneman, Tversky, Stanovich and Luria have done.

Now, perhaps we are in a better position to see that it is not the reasoning of unlettered peasants

that is somewhat peculiar, but rather it is the form of thought that has been valorized in Western thought and that has become a pillar of Western science. Paradigmatic genres evolved slowly in Western cultures and learning to master them requires years of schooling (Olson, 1977, 1994, 2009). Linguist Roy Harris (2009) has traced it to the Aristotelean attention to "sentences" rather than to "utterances". Sentences are treated as autonomous artifacts with stipulated meanings that may be examined for their semantic values quite independently of how they are used in context by persons. Harris writes:

With the arrival of 'the sentence', a new forum is created for the discussion of human thinking, and along with that comes the concomitant demand or expectation that all thinking (reasoning) worth bothering about has to be presented in sentential form. (This expectation is already realized by the time of Aristotle, because the sentence is the basis of the Aristotelian syllogism.)

This new forum, however, is also an intellectual cage or enclosure imposing its own limitations. It cannot accommodate non-sentential modes of thought .

(Harris, 2009, p.51)

In his study of the history of the understanding of metaphor, Leezenberg (2001) similarly concluded that "literal meanings, then, are not the start of the life of the language, but rather the end product of a long social and historical process... Literal meanings depend on the stabilization and codification of linguistic norms; these are achieved with the aid of literacy, education, standardization of language and lexicography" (p.302). Rather than taking the literal meanings of language as a given, then, there is compelling evidence that such awareness is a historical process, tied to a written tradition, and to systematic schooling. It is the special, indeed peculiar form of this formalized genre that students of rationality have failed to recognize in imputing irrationality to anyone who fails to honor it.

Humanists have long and strenuously protested the attempt by the "science and maths" to have a

monopoly on the concept of rationality and to insist that each mode of discourse, that is each genre, to have its own forms of rationality. They see that monopoly as seriously distorting the goals of education (Slouka, 2009).

Non-sentential modes of thought are, of course, what I have been describing as narrative modes of thought, thought in which both premises and inferences are open to redefinition in the context, or more precisely, statements for which one cannot safely make the *ceteris paribus* assumption that "all other conditions are equal". Such expressions are best treated as the manifestation of a human mind subject to equivocation and re-interpretation rather than as formal objects for which "other things being equal" may be assumed.

Bruner has helped us to recognize narrative as a mode of thought equal in value to more formal "paradigmatic" modes of thought, as well as to recognize that such formal modes may be enriched by reintroducing their narrative contexts. He does this for example by showing that legal judgments follow not narrowly from the principles of law but from the story in which the case can be embedded. Bruner points out that our plans usually work out but "our narrative gift gives us the power to make sense of things when they don't" (Bruner, 2002, p.28). What I have attempted to add to this story is the claim that the paradigmatic modes are cultural inventions tied to literacy and a literate tradition.

Conclusion

Many of our arts and sciences are devoted to creating such formal expressions whether in science, philosophy, or law. The advance of true statements from which valid inferences may be drawn is the goal of all of our sciences. Such laws hold by virtue, as mentioned, of the condition known a *Ceteris paribus*, the assumption that all other things being equal. Narrative is called for when all the conditions cannot be assumed to be equal, when human purposes, fears, hopes, beliefs and desires come into play. Which is to say, most of the time other than, and perhaps even then, when we are doing our science. Different genres have been invented to handle these differences, the

narrative and paradigmatic being two of these clusters of genre. And the study of thinking and reasoning will take an important step forward when thinking is set in the context of discourse genres that have been invented for ordering our world and our minds. What psychologists treasure as rationality is merely a special way of using language. It is using language in a mathematical kind of way that has given us our modern scientific world. Not to be disparaged, of course, but to be recognized for what it is. Then it will be possible to restore narrative to its privileged place in the human sciences.

Notes

1. Lecture presented to the Japanese Society for Qualitative Research, Sapporo, Japan, September 12, 2009
2. Philosophers who worry about *ceteris paribus* analyses do not worry about cases in which the "other factors" can be systematically evaluated; their worries are focused on *ceteris paribus* clauses that are not even eliminable *in principle*. For example, in the philosophy of science, it is common to say that there is a natural law that events of kind A **cause** events of kind B *if and only if* an event of type A, *ceteris paribus*, is always followed by an event of kind B— in order to rule out the possibility of other causal phenomena overriding the ordinary effect of the event of type A. But, in order to eliminate the *ceteris paribus* clause in *this* analysis, a philosopher would need to know *every* sort of causal event that could possibly override *any other* sort of causal event—and, even if there is *in principle* some finite list that exhausts all of these possibilities (a philosophically controversial claim), that list is, for certain, *not* known to the person claiming to be giving a definition of causality. So there is no-one who can say just what all is being ruled out by the *ceteris paribus* clause in this analysis. (Even if an omniscient physicist *could* spell it all out in a finite period of time, *we* are the ones purporting to understand how to use the words, and *we* see these things only through a glass, darkly.) (On line Wikipedia, 2009)
3. The technical notion of "descriptive invariance" is a kind of conceit, a pretense that rewordings are trivial and do not affect meaning. It is the same conceit that I examined in an earlier paper (Olson, 2004) in which I referred to this assumption as "the fateful illusion of modernism" the view

widely adopted in the 17th century that "the meaning was in the text" and required only reading, not interpretation. It was, I suggested, the working assumption of a particular, if important, genre, not a universal of language.

References

- Barnes, J. (2009). Flights. *New York Review of Books* (June 11). 56(10), 1-5.
- Bruner, J. S. (2002). *Making stories: Law, literature, life*. New York: Farrar, Strauss & Giroux.
- Burke, K. (1945). *A grammar of motives*. New York: Prentice-Hall.
- Cody, S. (1894). *The art of writing and speaking the English language*. New York: Funk & Wagnalls.
- Gaskell, E. (1848). *Mary Barton: A tale of Manchester life*. London: Dent.
- Harris, R. (2009). Speech and writing. In Olson, D. R., & Torrance, N. (Eds.), *The Cambridge handbook of literacy* (pp.46-58). New York: Cambridge University Press.
- Kahneman, D., & Tversky, A. (1996). On the reality of cognitive illusions. *Psychological Review*, 103, 582-591.
- Latour, B., & Woolgar, S. (1986). *Laboratory life: The construction of scientific facts*. Princeton, NJ: Princeton University Press.
- Leezenberg, M. (2001). *Contexts of metaphor*. New York: Elsevier.
- Luria, A. R. (1976). *Cognitive development: Its cultural and social foundations*. Cambridge Massachusetts: Harvard University Press.
- Olson, D. R. (1977). From utterance to text: The bias of language in speech and writing. *Harvard Educational Review*, 47, 257-281.
- Olson, D. R. (1994). *The world on paper: The conceptual and cognitive implications of writing and reading*. Cambridge, UK: Cambridge University Press.
- Olson, D. R. (2004). Knowledge and its artifacts. In Chemla, K. (Ed.), *History of science, history of text* (pp.231-245). Amsterdam: Kluwer.
- Olson, D. R. (2009). A theory of writing / reading: From literacy to literature. *Writing Systems Research*, 1(1), 51-64.
- Piaget, J. (1962). *The psychology of intelligence*. New York: Routledge.
- Reiss, T. J. (1982). *The discourse of modernism*. Ithaca, NY: Cornell University Press.
- Schlicht, E. (1985). *Isolation and aggregation in economics*. Berlin; New York: Springer-Verlag.
- Slouka, M. (2009). Dehumanized: When math and science rule the school. *Harper's Magazine*, 319, No. 1912, 32-40.
- Stanovich, K. (2008). *What intelligence tests miss: The psychology of rational thought*. New Haven, CT: Yale University Press.
- Tolstoy, L. (2002). *War and peace*. Toronto: The Modern Library / Random House., (Толстой, Л. (1868) *Война и мир*.)
- Wikipedia On-line. (2009). "*Ceteris paribus*". http://en.wikipedia.org/wiki/Ceteris_paribus/(Date of reference: August, 11, 2009)
- Winner, E., Rosenblatt, E., Windmueller, G., Davidson, L., & Gardner, H. (1986). Children's perception of "aesthetic" properties of the arts: Domain-specific or pan-artistic? *British Journal of Developmental Psychology*, 4, 149-160.

(2009.10.30 受稿, 2009.11.30 受理)

解説

小島康次 (北海学園大学経営学部経営情報学科)

Yasuji Kojima Faculty of Business Administration, Graduate School of Business Administration, Hokkai-gakuen University

タイトルの日本語訳

文字通りの意味、文学的意味と心

——ジェローム・ブルーナーと

認知研究におけるナラティブ・ターン

オルソンとの出会いは 11 年前に遡る。在外研修でマサチューセッツ州ウースターにあるクラーク大学に 1 年間滞在した折に、ヴァルシナーやバンバーグらとともに参加したのがピアジェ学会 (シカゴ) だった。小さな学会であるが、ピアジェ学会という名とは必ずしもそぐわない多種多様な理論、領域の研究を許容する懐の深い雰囲気が気に入って、それからほぼ毎年この学会に参加するようになった。名前しか知らなかった著名な研究者が、毎年、招待講演者として登壇し、懇親会では気軽に話し相手になってくれるのが嬉しく、懇親会にも欠かさず参加した。その年の招待講演者がオルソンだった。多くの若手参加者がオルソンの講演を讃える声があちこちで聞かれた。懇親会では一生懸命話したが内容は覚えていない。

2006 年 7 月上旬から 10 月上旬までの 3 ヶ月間、ト

ロント大学のオンタリオ教育研究所に滞在することになった。その間、名誉教授室にたまたまやってくるオルソンの予定を秘書に確認して、アポイントメントを取り8年ぶりの再会を果たした。と言ってもオルソンは私を覚えていなかった。さもあるう。遠いアジアの国から来た無名の男が何やら意味不明のことをまくし立てている、シカゴのピアジェ学会では、そんな印象だったのだろう。この時は少し様子が違った。第一に、ブルーナーに対する評価に関する意見において共通点が多かったこと（これが今回の招待講演者としての招聘に繋がった）、第二に、ブルーナーの評価とも関わるが、トロント大学の図書館（北米で有数の蔵書を誇る大図書館）で偶然見つけたブランダムの特集論文に関する話題で盛り上がり、その後、ナラティブ論について議論する端緒が開かれたこと（また、オルソンの専門であるリテラシーに関して、漢字表現の象形性についての話題も共有できた）。

ブルーナーをどのように評価するかについて、欧米でも必ずしも一つに定まっているわけではない。彼の理論的立ち位置に関する疑問をぶつけても明確な答えが得られない経験（マイク・トマセロ、キャサリン・ネルソンといったブルーナーの影響下にある方々に直接、質問してみた結果）から、オルソンに対してもそれほど期待していたわけではなかった。それだけに、この時のオルソンとの対話は一種、衝撃的であり、大げさに言えば、目からウロコが落ちるような感覚だった。以下、その時のオルソンとの議論を踏まえて、オルソン論文についての解題を含む解説を試みる。

リンダ問題と *Ceteris paribus*

アメリカの教育改革の立役者（ウッズホール会議を主導）としてピアジェの認知発達理論をアメリカに導入したブルーナーだが、同時に、ヴィゴツキー理論に精通し、やがて論理モードに対するナラティブ・モードを対比させたことはよく知られている。

初期の認知心理学・認知科学が採った基本的な認識論、論理モードあるいはパラディグマティックは、形式的な数学的規則に基づく概念化やカテゴリー化によって記述や説明にかんする合理的な体系を構築する方略をとる。具体的には、連言 (and) と選言 (or)、あ

るいは上位概念と下位概念、厳密含意のような手続きを用いて、特定の文脈から一般的な命題を抽出し、証明可能な指示的意味を確実にすることで経験的真理を吟味する方法である。

オルソン論文の中では、「リンダ問題」としてカーネマンとトヴァースキーにより提起されて⁷³ 仄に知られた例が取り上げられている。

リンダは 31 歳で独身。率直で聡明。大学では哲学を専攻し、人種差別問題や社会問題に関心をもち、反核運動に参加していました。では、次のうち、いかにもリンダらしいのはどちらでしょう。A：銀行の窓口にいる受付係の女性、B：保険の外交員である女性、C：銀行の窓口で受付係をしながら、女性解放運動もしている女性

この質問に対して、80%の人がCを選択したという（それに次いで多いのがB）。これは代表性ヒューリスティクスあるいは類似性ヒューリスティクスによる推論の誤りの例として知られているもので、パラディグマティックの観点からすると誤った判断だということになる。なぜなら、Cは連言命題でAの部分集合だから、確率のみから見ればAの答えの方がリンダに該当する可能性が高いからである。

しかし、オルソン論文はこのいわばカーネマンらのメタ・ストーリー（論理主義という物語）のイカサマを暴く。*Ceteris paribus*。このラテン語の慣用句は、二つの状態を比較する際に、「他の要因が等しければ」という因果的・論理的な条件を指す言葉である。「リンダ問題」で8割を超す「誤答」は、決して回答者の論理性の欠如を表すものではなく、この問題における *Ceteris paribus* の欠如を表すものだというのである。つまり、この問題に含まれるナラティブ性を無視したために起こった出題者側の誤りなのである。社会心理学のトピックとしてこの問題に初めて接した時に感じた違和感の正体はこれだった。

オルソン論文は物語性とはそもそも *Ceteris paribus* の原則に違反することによって面白さを担保するものであることを丁寧に説明し、さらにもう一つの言語学上のトリックを指摘する。「リンダ問題」で「銀行員」というのは、「銀行員とフェミニスト」を含むカテゴリーであり、「動物」が「ウサギ」を含む上位カ

テゴリーであるのと同じものと見られる。しかし、物語性を含む日常会話においては、“or”は2つのカテゴリーを対比する使用法が暗黙のうちに含意されている。「銀行員」か (or) 「銀行員とフェミニスト」か、という比較は、カテゴリーの包含関係ではなく、「フェミニストでない銀行員」と「フェミニストである銀行員」の対比を表わすことが多い。それは「ウサギ」と「動物」を or で比較した場合、「ウサギ」と「ウサギ以外の動物」との対比を表わす場合が多いのと同様である。これはまさに、ピアジェ (Piaget, 1960/1947) が幼児で見出したことでもある。

実験者：「3羽のウサギと2羽のアヒルがいます。
ウサギと動物はどちらが多いでしょう？」
子ども：「ウサギです。だって、アヒルは2羽しかないもの。」

実験者が意図した“動物”とはウサギを含む上位概念としての動物だった(論理モード)が、子どもにとって、“動物”とは、ウサギ以外の動物、すなわち、ここでは“アヒル”を指すと解釈された(ナラティブ・モード)のである。

なぜ、「リンダ問題」をやり玉にあげたのか。このことに対するオルソンの言い分はいかにも皮肉屋の彼らしい。「ノーベル賞を受賞した研究を叩きのめすのは面白いじゃないか」(ダニエル・カーネマンは、2002年、不確実性のもとでの人間の判断など、心理学的研究を経済学に導入した功績によりノーベル経済学賞を受賞した)。

ナラティブ・モードは確かに、論理モードが掬い取れない豊かな可能世界をいきいきと描き出す道具であり、科学や哲学とは異なるもう一つのリアルな世界へ至る道筋であることは間違いない。われわれは、自分自身を語る語り方によっていかようにも自らの世界を創り出せる存在だとも言える。悪名高い相対主義を連想される方がいるかもしれない。

リック・シュウェダー (Shweder, 1990) を引用して、ナラティブ世界が全く自由に構成されるものではなく、社会・文化に通用する物語の中から引き出された材料を用いて作られるものだというブルーナー (Bruner, 2007/2002) は、その意味で相対主義者では

ない。しかし、極端な相対主義を否定しても、結局、文化相対主義という若干薄められた相対主義に横滑りするだけではないのか？

ブルーナーは相対主義者ではない

1970年代、アメリカのプラグマティズムが心理学にも浸透してきた時代にあつて、多くの心理学者(例えば、当時アメリカ心理学会の会長を務めていたジェローム・ケーガン)が自らを相対主義者であると位置づけていた。それは、先の世紀が直面した課題、すなわち19世紀までの絶対的合理主義に対するアンチテーゼを端的に表す立場だったと考えられる。初期のムーブメントはどうしても極端な形をとりがちだ。やがて相対主義が放つ強烈な毒素が知られるようになると、今度はプラグマティストという呼称すら、批判ばかりで生産的な議論のできない者を意味するまでになる。

初期のブルーナー (Bruner, 1998/1986) は論理モードとナラティブ・モードの違いを際立たせることに紙数を費やし、ネルソン・グッドマン (Goodman, 1987/1978) の「世界とバージョンの区別」説を称揚する筆致からして、相対主義の陥穽にやや無防備だったように思われる。もちろん、ブルーナーほどの泰斗が相対主義の危険性に無自覚だったわけではない。「……ひとたび根元的実在が捨てられると、世界の正しいモデルを誤ったモデルから区別する方法としての対応の基準を、われわれは失う。こうした条件のもとでは、後続しそうな相対主義の奔流から、われわれは何によって身を守れようか。(……根本的な相対主義は、グッドマンの批判者たちにとってと同様、グッドマン自身にとっても受け入れがたいものである。)」(Bruner, 1998/1986) しかし、グッドマン説において「世界」に代わる「複数のバージョン」間の比較の基準とは何だったのか結論は得られていない。

その後の著作において、ブルーナー (Bruner, 1999/1990) は「構成主義と相対主義」というテーマで、より具体的な議論を展開することによって、現在の立場である社会構成主義的な方向を鮮明にした。この間のブルーナーの悪戦苦闘はしかし、衆目に明らかになることはなかった。キャサリン・ネルソン曰く、「彼(ブルーナー)はクレバー(利口)なのよ。」心理学

の泰斗は老獺である。

ブルーナーは二元論者ではない (?)

リンダ問題に戻ろう。

リンダ問題とは一体何だったのか。パラディグマティックな課題として作られたものだが、実際には、ナラティブな意味を無視できないことは明らかである。つまり、物語の中に埋め込まれた論理性を問う問題は、結局、論理の問題でもナラティブの問題でもない宙ぶらりんな課題になってしまう。言い換えれば、論理的に解釈することも、ナラティブ的に解釈することも可能なのである。だから、この種の本当の課題は、出題者の意図が論理を求めているのかナラティブを求めているのかを見極めることにある。

ヴィゴツキーやルリアの研究をもって嚆矢とする文化心理学（比較文化研究）は、マイケル・コール（Cole, 2002/1996）、パーバラ・ロゴフ（Rogoff, 2006/2003）らによって完成され、さらに新たな進展をみた。近代社会の学校教育が組織的にやっていることは、たとえ物語であっても、それを論理モードによって解釈するというディスコースの約束事（作法）を教えることだというのである。リンダ問題のように、物語のスタイルに偽装された論理問題はとりわけ難しく、多くの誤答を誘発する“難問”とされる。

ハリス（Harris, 2009）、リーゼンバーグ（Leezenberg, 2001）、スロウカ（Slouka, 2009）を引用しながらオルソンは、論理モードが始まったギリシャの形式論理が「文（sentence）」の発展とともに文明化の道をたどったと喝破する。確かにアリストテレスの三段論法は文の形式を取って展開されている。人文科学は数学・自然科学が合理性に対して独占権をもつとする見方に激しく異議を申し立ててきた。数学・自然科学と人文科学とは、それぞれ独自の合理性の形式をもつ2つのモード（論理とナラティブ）によって支えられた異なるジャンルだと主張される。

思考の「非一文モード」、すなわちナラティブ・モードは他の要因を同等にすることが不可能な大部分の日常生活における出来事を表現する思考様式である。ブルーナー（2007/2002）はこのことを、裁判を例にとり判決が狭い意味の法原理のみによるのではなく、

判例が埋め込まれたストーリーにもよることを示す。わがオルソンが文字や読み書きの伝統（いわゆるリテラシー）に関する研究をしている理由がここにある。パラディグマティックとは、^{なかに}籠中、文すなわち文字や読み書きの文化が生み出してきた思考様式だからである。

それでは、論理モードとナラティブ・モードの関係は、単に両モードが独立な思考様式として並立しているというものなのだろうか。言い換えれば、ブルーナーは二元論者なのだろうか。このことについてオルソン論文は直接答えていない。しかし、ハリス（2009）を引用して、話し言葉が元来われわれのナラティブそのものであり、書き言葉の発達によって論理モードが洗練されてきたという歴史を主張することからすれば、近代社会の論理主義がむしろ例外的な現象であり、「他の要因が等しい」場合にのみ成り立つある特殊な語りの様態だとも言える。

オルソン論文の解説としてはこれで過不足なからう。先の問いに対する答えは読者の判断に委ね、ナラティブ談義はここで清々しく幕を閉じるのが通例である。しかし、理論的関心の高い方々に対してもう一步踏み込んだ哲学的解題をしておきたい。3年前、オルソンとの議論で一番興奮したのがこのことだった。

ブルーナー（&オルソン）はナラティブ一元論者ではない（!）

オルソン論文には、ブルーナー（&オルソン）がナラティブと論理という2つの異なるモードを並立させる二元論者なのか、ナラティブ一元論の立場を取ることについて決定的な議論はみられない。というより、ブルーナーが折に触れ参照するクワイン（Quine, 1992/1953）、また、ローティ（Rorty, 1993/1979）を始めとするネオ・プラグマティスト達の立場からすれば、そうした問い自体、意味をなさないのである。彼らは、根本的な真理、あらゆるものを基礎づける絶対的なもの、といった観念を無用の長物として退ける。畢竟するにナラティブ論者は多元論者にならざるを得ない。それでは先に否定したはずの相対主義の影がまたぞろ忍び寄ってくるではないか。

唐突に聞こえるかもしれないが、2つのモード論は

科学哲学におけるトマス・クーン (Kuhn, 1971/1970) のパラダイム論と同型の問題をはらんでいると考えられる。パラダイム論が科学哲学の文化人類学化をもたらした結果、唯一の真理や絶対的な合理性というものが否定され、代わって真理や合理性は多元主義的なものとして再定式化される。つまり、グッドマン (1987/1978) の『世界制作の方法』に戻らざるを得ない。先送りした複数バージョン間の優劣を決する基準の問題が再燃する。

私がロバート・ブランダムの名前をオルソンに出した時、彼が即座に反応したのは驚いた。トロント大学の図書館で偶然に見つけた雑誌 *Pragmatics & Cognition* (ブランダム の著作 *Making it explicit*, 1994 に関する特集号) は、しかし、考えてみれば言語学関連の専門誌だからオルソンが知っていて当然であった。というより、オルソン自身の論文も掲載されたことがあるのを知らなかったことの方が迂闊だった。ブランダムは、クワインと同時代のプラグマティストでありながら、それほど名前が知られていない哲学者ウィルフリド・セラーズの一番弟子であり、晦渋なセラーズ理論 (Sellars, 2006/1956) の注解者として知る人ぞ知る存在である。

さて、グッドマンの世界に対応する複数バージョンを複数のパラダイムと置き換えてみよう。そうすると、これまでの問題は慣れ親しんだパラダイム論における「共約不可能性」の問題として定式化できる。世界を表す複数のバージョン間で有意義なやり取りができるとすれば、そこには何らかの共約可能性がなければならぬ。といっても複数の異なるパラダイムを超えた中立的 (あるいは超越的) な視点というのはデイヴィッドソン (Davidson, 1982) の批判をまつまでもなく不可能である。なぜなら、枠組み (ジャンル) は言語に組み込まれている以上、すべての枠組み (ジャンル) から中立的な立場というのは、言語を使用しない場合にしか成り立たないからである。

セラーズ・ブランダム の解決法はそれほど奇抜なものではない。

「リンダは反核運動に参加していた」という言明は、リンダが反核運動をしていたことを肯定し、是認する言語行為であり、正当化の義務を負うことを意味することになる。それは、単にリンダが反核運動に参加し

ていたことを第三者的 (非規範的) に理解することとは違ふとされる。ナラティブ・モードは、言明に行為レベルの意味が付随したもので、論理モードとは、単なる言明自体の論理的な規則性に関する叙述だとも考えられる。

論証様式の内容を理解することと、その論証様式にコミットし、それらを行為規範として積極的に選ぶ取ることとを区別することで共約不可能性の問題は回避できると考えられる。理解とは異質なものに対してなされるものであり、その基盤は規範的要素を含まない「生活世界」(フッサール) に根差すものだからである。「マーリン・ドナルドを知っているか?」というオルソンの問いに私は「もちろん」と答えた。ドナルドの *Origins of the modern mind* (Donald, 1991) は、生活世界から科学世界への変化を人間が進化するプロセスと重ね合わせて論じた好著である。

オルソンがブランダムに傾倒し、ひいてはセラーズを擁護することから、必然的に言語重視の研究方向が導き出される。セラーズは、抽象的存在者や個物についての意識はすべて言語的なものだと考える。自然科学的人間像と人文科学的人間像の統合を、言語を介して実現しようとするセラーズの目標は、オルソンによって心理学という実証レベルで引き継がれていると言えよう。また、セラーズは信念や欲求や意図のような心的状態を用いて人間の行動を説明するフォークサイコロジーを理論とみなすいわゆる「理論」理論説の最初の提唱者であり、オルソン の心の理論研究にもセラーズの影響を見て取ることができる。

引用文献

- Brandson, R. B. (1994). *Making it explicit: Reasoning, representing and discursive commitment*. Cambridge: Harvard University Press.
- ブルーナー, J. S. (1998). 可能世界の心理 (田中一彦, 訳). 東京: みすず書房. (Bruner, J. S. (1986). *Actual minds, possible worlds*. Cambridge: Harvard University Press.)
- ブルーナー, J. S. (1999). 意味の復権——フォークサイコロジーに向けて (岡本夏木・仲渡一美・吉村啓子, 訳). 京都: ミネルヴァ書房. (Bruner, J. S. (1990). *Acts of meaning*. Cambridge: Harvard University Press.)
- ブルーナー, J. S. (2007). ストーリーの心理学——法・

- 文学・生をむすぶ (岡本夏木・吉村啓子・添田久美子, 訳). 京都: ミネルヴァ書房. (Bruner, J.S. (2002). *Making stories: Law, literature, life*. New York: Farrar, Strauss & Giroux.)
- コール, M. (2002). 文化心理学——発達・認知・活動への文化—歴史的アプローチ (天野清, 訳). 東京: 新曜社. (Cole, M. (1996). *Cultural psychology: A once and future discipline*. Cambridge: Harvard University Press.)
- Davidson, D. (1982). On the very idea of a conceptual scheme. In Meiland, J. W., & Krausz, M. (Eds.), *Relativism: Cognitive and moral*. Notre Dame: University of Notre Dame Press.
- Donald, M. (1991). *Origins of the modern mind: Three stages in the revolution of culture and cognition*. Cambridge: Harvard University Press.
- グッドマン, N. (1987). 世界制作の方法 (菅野盾樹・中村雅之, 訳). 東京: みすず書房. (Goodman, N. (1978). *Ways of worldmaking*. Indianapolis: Hackett Publishing Company.)
- Harris, R. (2009). Speech and writing. In Olson, D. R., & Torrance, N. (Eds.), *The Cambridge handbook of literacy*. New York: Cambridge University Press.
- クーン, T. (1971). 科学革命の構造 (中山茂, 訳). 東京: みすず書房. (Kuhn, T. (1970). *The structure of scientific revolutions*. Chicago: University of Chicago Press.)
- Leezenberg, M. (2001). *Contexts of metaphor*. New York: Elsevier.
- ピアジェ, J. (1960). 知能の心理学 (波多野完治・滝沢武久, 訳). 東京: みすず書房. (Piaget, J. (1947). *La psychologie de l'intelligence*. A. Colin.)
- クワイン, W. V. O. (1992). 論理的観点から——論理と哲学をめぐる九章 (飯田隆, 訳). 東京: 勁草書房. (Quine, W. V. O. (1953). *From a logical point of view: 9 logico-philosophical essays*. Cambridge: Harvard University Press.)
- ロゴフ, B. (2006). 文化的営みとしての発達——個人, 世代, コミュニティ (當眞千賀子, 訳). 東京: 新曜社. (Rogoff, B. (2003). *The cultural nature of human development*. USA: Oxford University Press.)
- ローティ, R. (1993). 哲学と自然の鏡 (野家啓一, 監訳). 東京: 産業図書. (Rorty, R. (1979). *Philosophy and the mirror of nature*. New Jersey: Princeton University Press.)
- セラーズ, W. (2006). 経験論と心の哲学 (浜野研三, 訳). 東京: 岩波書店. (Sellars, W. (1956). *Empiricism and the philosophy of mind*. Minneapolis: University of Minnesota Press.)
- Shweder, R. (1990). Cultural psychology: What is it? In Stigler, J. W., Shweder, R. A., & Herdt, G. (Eds.), *Cultural psychology: Essays on comparative human development*. New York: Cambridge University Press.
- Slouka, M. (2009). Dehumanized: When math and science rule the school. *Harper's Magazine*, 319(1912), 32-40.